Panasonic®

TV/DVD/VCR Combination Operating Instructions

Omnivision VHS

Model No. PV-DF2003/PV-DF2703

• Initial Setup and Connection Procedures are on pages 14 to 15.

DOLBY DIGITAL

dts®

Designed for Windows Media™

JPEG Playback

*DVD-R video playback

MP3 PLAYBACK

*CD-R/RW playback

COMPACT disc DIGITAL AUDIO

COMPACT disc DIGITAL VIDEO

DVD VIDEO™

*Ability to play back may depend on recording conditions.

energy

As an ENERGY STAR® Partner, Matsushita Electric Corporation of America has determined that this product or product model meets the ENERGY STAR® guidelines for energy efficiency.

READY TO PLAY!

Please read these instructions carefully before attempting to connect, operate or adjust this product. Please save this manual.
Spanish Quick Use Guide is included.
(Guía para rápida consulta en español está incluida.)

This operating instruction book is designed for use with models PV-DF2003 and PV-DF2703. Illustrations in this manual show the PV-DF2703. Features may vary, so please read carefully.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

LSQT0668B

Important Safeguards and Precautions

READ AND RETAIN ALL SAFETY AND OPERATING INSTRUCTIONS. HEED ALL WARNINGS IN THE MANUAL AND ON UNIT

INSTALLATION

1 POWER SOURCE CAUTION
Operate only from power source indicated on unit or in this manual. If uncertain, have your Electric Utility Service Company or Video Products Dealer verify your home power source.

2 POWER CORD PLUG
For safety, this unit has a polarized type plug (one wide blade), or a three-wire grounding type plug. Always hold the plug firmly and make sure your hands are dry when plugging in or unplugging the AC power cord.
Regularly remove dust, dirt, etc. on the plug.

POLARIZED PLUG CAUTION:
The plug fits into outlet only one way. If it cannot be fully inserted, try reversing it. If it still will not fit, have an electrician install the proper wall outlet. Do not tamper with the plug.

GROUNDING PLUG CAUTION:
The plug requires a three-hole grounding outlet. If necessary, have an electrician install the proper outlet. Do not tamper with the plug.

3 POWER CORD
To avoid unit malfunction, and to protect against electrical shock, fire or personal injury:
- Keep power cord away from heating appliances and walking traffic. Do not rest heavy objects on, or roll such objects over the power cord.
- Do not tamper with the cord in any way.
- An extension cord should have the same type plug (polarized or grounding) and must be securely connected.
- Overloaded wall outlets or extension cords are fire hazards.
- Frayed cords, damaged plugs, and damaged or cracked wire insulation are hazardous and should be replaced by a qualified electrician.

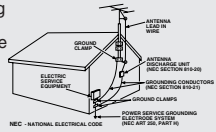
4 DO NOT BLOCK VENTILATION HOLES
Ventilation openings in the cabinet release heat generated during operation. If blocked, heat build-up may result in a fire hazard or heat damage to cassettes or discs.
For your protection:
a. Never cover ventilation slots while unit is ON, or operate unit while placed on a bed, sofa, rug, or other soft surface.
b. Avoid built-in installation, such as a book case or rack, unless properly ventilated.

5 AVOID EXTREMELY HOT LOCATIONS OR SUDDEN TEMPERATURE CHANGES
Do not place unit over or near a heater or radiator, in direct sunlight, inside closed vehicles, in high temperature [over 95 °F (35 °C)], or in over 75% humidity. If unit is suddenly moved from a cold place to a warm one, moisture may condense in unit and on the tape causing damage. Never subject unit to vibration, impact, or place it so that the surface is tilted as internal parts may be seriously damaged.

6 TO AVOID PERSONAL INJURY
- Never place unit on support or stand that is not firm, level, and adequately strong. The unit could fall causing serious injury to a child or adult and damage to the unit.
- Move any appliance and cart combination with care.
Quick stops, excessive force, and uneven surfaces may cause objects to overturn.
- Carefully follow all operating instructions.

OUTDOOR ANTENNA INSTALLATION

1 SAFE ANTENNA AND CABLE CONNECTION
An outside antenna or cable system must be properly grounded to provide some protection against built up static charges and voltage. Section 810 of the National Electrical Code, ANSI/NFPA 70 (in Canada, part 1 of the Canadian Electrical Code) provides information regarding proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.


ANTENNA LEAD IN WIRE
GROUND CLAMP
ANTENNA DISCHARGE UNIT (NEC SECTION 810-20)
ELECTRIC SERVICE EQUIPMENT
GROUNDING CONDUCTORS (NEC SECTION 810-21)
GROUND CLAMPS
POWER SERVICE GROUNDING ELECTRODE SYSTEM (NEC ART 250, PART H)
NEC - NATIONAL ELECTRICAL CODE

2 KEEP ANTENNA CLEAR OF HIGH VOLTAGE POWER LINES OR CIRCUITS
Locate an outside antenna system well away from power lines and electric light or power circuits so it will never touch these power sources should it ever fall. When installing antenna, absolutely never touch power lines, circuits or other power sources as this could be fatal.

USING THE UNIT

Before unit is brought out of storage or moved to a new location, refer again to the INSTALLATION section of these safeguards.

1 KEEP UNIT WELL AWAY FROM WATER OR MOISTURE, such as vases, sinks, tubs, etc.

2 IF EXPOSED TO RAIN, MOISTURE, OR STRONG IMPACT, unplug unit and have it inspected by a qualified service technician before use.

3 ELECTRICAL STORMS
During a lightning storm, or before leaving unit unused for extended periods of time, disconnect all equipment from the power source as well as the antenna and cable system.

4 WHEN UNIT IS PLUGGED IN
• DO NOT OPERATE IF:
- liquid has spilled into unit.
- unit was dropped or otherwise damaged.
- unit emits smoke, odours, or noises.
Immediately unplug unit, and have it inspected by a service technician to avoid potential fire and shock hazards.
• Never drop or push any object through openings in unit. Touching internal parts may cause electric shock or fire hazard. Do not put any foreign object on the tray.
• Keep magnetic objects, such as speakers, away from unit to avoid electrical interference.

5 USING ACCESSORIES
Use only accessories recommended by the manufacturer to avoid risk of fire, shock, or other hazards.

6 CLEANING UNIT
Unplug unit. Use a clean, dry, chemically untreated cloth to gently remove dust or debris. DO NOT USE cleaning fluids, aerosols, or forced air that could over-spray, or seep into unit and cause electrical shock. Any substance, such as wax, adhesive tape, etc. may mar the cabinet surface. Exposure to greasy, humid, or dusty areas may adversely affect internal parts.

SERVICE

1 DO NOT SERVICE PRODUCT YOURSELF
If, after carefully following detailed operating instructions, the unit does not operate properly, do not attempt to open or remove covers, or make any adjustments not described in the manual. Unplug unit and contact a qualified service technician.

2 REPLACEMENT OF PARTS
Make sure the service technician uses only parts specified by the manufacturer, or have equal safety characteristics as original parts. The use of unauthorized substitutes may result in fire, electric shock, or other hazards.

3 SAFETY CHECK AFTER SERVICING
After unit is serviced or repaired, request that a thorough safety check be done as described in the manufacturer's service literature to ensure video unit is in safe operating condition.

Safety Precautions/Mesures de sécurité

Warning : **To prevent fire or shock hazard, do not expose this equipment to rain or moisture.**
Caution : **To prevent electric shock, match wide blade of plug to wide slot, fully insert.**
Avertissement : **Afin de prévenir tout risque d'incendie ou de chocs électriques, ne pas exposer cet appareil à la pluie ou à une humidité excessive.**
Attention : **Pour éviter les chocs électriques, introduire la lame la plus large de la fiche dans la borne correspondante de la prise et pousser jusqu'au fond.**
FCC WARNING : **Any unauthorized changes or modifications to this equipment would void the user's authority to operate.**

This video recorder, equipped with the HQ (High Quality) System, is compatible with existing VHS equipment. Only use those tapes with the VHS mark. It is recommended that only cassette tapes that have been tested and inspected for use in 2, 4, 6, and 8 hour VCR machines be used. This television receiver provides display of television closed captioning in accordance with §15.119 of the FCC rules.

CAUTION:
UNIT IS A CLASS I LASER PRODUCT.
HOWEVER THIS UNIT USES A VISIBLE LASER BEAM WHICH COULD CAUSE HAZARDOUS RADIATION EXPOSURE IF DIRECTED. BE SURE TO OPERATE THE UNIT CORRECTLY AS INSTRUCTED. WHEN THIS UNIT IS PLUGGED TO THE WALL OUTLET, DO NOT PLACE YOUR EYES CLOSE TO THE OPENING OF THE DISC TRAY AND OTHER OPENINGS TO LOOK INTO THE INSIDE OF THIS UNIT. USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT ATTEMPT TO REPAIR THE UNIT YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

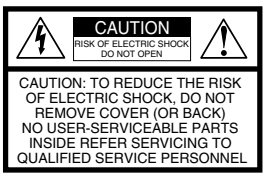
CAUTION:
LASER RADIATION WHEN OPEN. DO NOT STARE INTO BEAM.

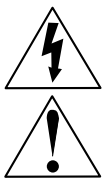
ATTENTION:
RAYONNEMENT LASER EN CAS D'OUVERTURE. NE PAS REGARDER DANS LE FAISCEAU.

(Inside of product)

FCC NOTICE:
This equipment has been tested and found to comply with part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when operated in a residential environment. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, use the equipment in another location and/or utilize an electrical outlet different from that used by the receiver. If necessary, consult the dealer or an experienced radio/TV technician for help. You may find the booklet, "Something About Interference" available from FCC local regional offices helpful.

This product utilizes both a Cathode Ray Tube (CRT) and other components that contain lead. Disposal of these materials may be regulated in your community due to environmental considerations. For disposal or recycling information please contact your local authorities, or the Electronics Industries Alliance: <http://www.eiae.org.>


CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK)
NO USER-SERVICEABLE PARTS INSIDE REFER SERVICING TO QUALIFIED SERVICE PERSONNEL



This symbol warns the user that uninsulated voltage within the unit may have sufficient magnitude to cause electric shock. Therefore, it is dangerous to make any kind of contact with any inside part of this unit.

This symbol alerts the user that important literature concerning the operation and maintenance of this unit has been included. Therefore, it should be read carefully in order to avoid any problems.

Region Management Information

This unit is designed and manufactured to respond to the Region Management Information that is recorded on a DVD disc. If the Region number described on the DVD disc does not correspond to the Region number of this unit, this unit cannot play this disc.

- The region number of this player is "**1**."
- The player will play DVD-Video marked with labels containing "**1**" or "**ALL**."

Example:

Before Using

Congratulations

On your purchase of one of the most sophisticated and reliable products on the market today. Used properly, it will bring you and your family years of enjoyment. Please fill in the information below. The serial number is on the tag located on the back of your unit.

Date of Purchase

Dealer Purchased From

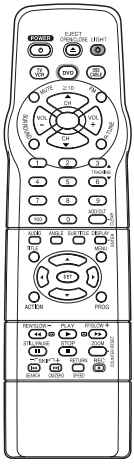
Dealer Address

Dealer Phone No.

Model No.

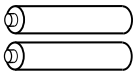
Serial No.

Accessories



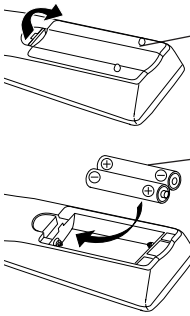
☐ Remote Control
LSSQ0302

☐ Batteries 2 “AA”



To order accessories, call toll free 1-800-332-5368.

Loading the Batteries



1) Open the cover.

2) Insert batteries as marked.

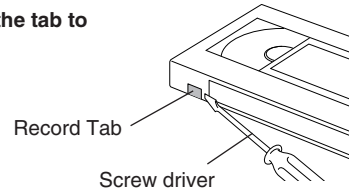
3) Close the cover.

☐ **Battery replacement caution**

- Do not mix old and new batteries.
- Do not mix alkaline with manganese batteries.

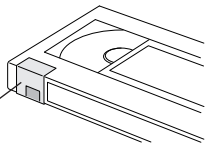
Prevent Accidental Tape Erasure

Break off the tab to protect.



To record again.

Cover the hole with cellophane tape.



Record/Playback Time

Only use tapes with the VHS mark in this unit.

Tape Speed Setting	Type of Video Cassette		
	T60	T120	T160
SP (Standard Play)	1 Hour	2 Hours	2 Hours 40 Minutes
LP (Long Play)	2 Hours	4 Hours	5 Hours 20 Minutes
SLP (Super Long Play)	3 Hours	6 Hours	8 Hours

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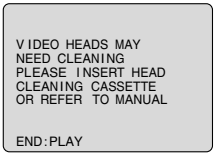
Information (Unit, Cassette, Disc)

Head Cleaning

Playing older or damaged tapes may eventually cause video heads to become clogged.

Head Clog Sensor

During playback this screen appears if clogging is detected. To clear message from screen, press PLAY on the remote or unit.



- **Use "dry" type head cleaning cassette only.** (Part No. NV-TCL30PT is recommended.)
- Follow cleaning tape directions carefully. Excessive use of head cleaning tape can shorten the video head life.

DST (Daylight Saving Time)

Unit auto adjusts clock for DST (Daylight Saving Time.)

■ **Spring (First Sunday in April)**

DST: ON → Sets clock ahead one hour.

■ **Autumn (Last Sunday in October)**

DST: OFF → Turns clock back one hour.

- If your area does not observe Daylight Saving Time, select DST : OFF (see "Clock" on pages 16 and 17).
- Keep these time changes in mind when programming the unit for timer recordings.

Features for a Quality Picture

Digital Auto Tracking
Continuously analyzes the signal and adjusts for optimum picture quality.

Manual Tracking Control (to reduce picture noise)
Use during Playback and Slow Motion mode to reduce picture noise. Press the 3 or 6 NUMBER key on the remote control or CH ▲▼ on the unit until the picture clears up. To return to Auto Tracking, press POWER off, then on again a few seconds later.

V-Lock Control
In Still mode, the 3 or 6 NUMBER key on the remote control or CH ▲▼ on the unit operate as a V-Lock control to reduce jitter.

Apparatus Claims of U.S. Patent Nos. 4,631,603, 4,577,216, 4,819,098, and 4,907,093, licensed for limited viewing uses only.

This product incorporates copyright protection technology that is protected by method claims of certain U.S. Patents and other intellectual property rights owned by Macrovision Corporation and other rights owners. Use of this copyright protection technology must be authorized by Macrovision Corporation, and is intended for home and other limited viewing uses only unless otherwise authorized by Macrovision Corporation. Reverse engineering or disassembly is prohibited.

Specifications

Display		
Picture Tube		20 inch measured diagonal pure flat Picture Tube (PV-DF2003) 27 inch measured diagonal pure flat Picture Tube (PV-DF2703)
VCR		
Video Recording System		4 rotary heads helical scanning system
Audio Track		1 track (Normal) 2 channel (Hi-Fi Audio Sound)
Tuner		
Broadcast Channels		VHF 2 ~ 13, UHF 14 ~ 69
CABLE Channels		Midband A through I (14 ~ 22) Superband J through W (23 ~ 36) Hyperband AA ~ EEE (37 ~ 64) Lowband A-5 ~ A-1 (95 ~ 99) Special CABLE channel 5A (01) Ultraband 65 ~ 94, 100 ~ 125
FM Radio		
Band Range		87.5 MHz ~ 108.1 MHz
General		
Power Source		120 V AC, 60 Hz
Power Consumption	Power On	Approx. 134 W (PV-DF2003) Approx. 161 W (PV-DF2703)
	Power Off	Approx. 3.5 W
Television System		EIA Standard NTSC color
Speaker		2 pieces 5 W
Operating Temperature		5 °C ~ 35 °C (41 °F ~ 95 °F)
Operating Humidity		10 % ~ 75 %
Weight		30 kg (66.1 lbs.) (PV-DF2003) 52 kg (114.4 lbs.) (PV-DF2703)
Dimensions (W x H x D)		604 mm (23-3/4″) x 523 mm (20-5/8″) x 503 mm (19-3/4″) (PV-DF2003) 760 mm (29-7/8″) x 651 mm (25-5/8″) x 503 mm (19-3/4″) (PV-DF2703)
Discs played		
DVD disc (DVD-Video, DVD-R)		12 cm (5″) single-sided, single-layer 12 cm (5″) single-sided, double-layer 12 cm (5″) double-sided, double-layer (one layer per side) 8 cm (3″) single-sided, single-layer 8 cm (3″) single-sided, double-layer 8 cm (3″) double-sided, double-layer (one layer per side)
Compact disc (CD-DA, VIDEO CD, CD-R, CD-RW)		5″ (12 cm) disc 3″ (8 cm) disc
MP3, WMA, JPEG		
Digital audio output		
Optical digital output		Optical connector
Pickup		
Wavelength		655 nm (DVD) 790 nm (Video CD/CD) Laser power: CLASS II

Note

- Designs and specifications are subject to change without notice.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

Discs that can be played

Disc type	Disc Logo	Disc formats supported by this unit
DVD-Video	DVD VIDEO / DVD VIDEO	• DVD-Video format
DVD-R	DVD R R4.7	• DVD-Video formatted discs (finalized*) It may not be possible to play these discs in all cases due to the type of disc or condition of the recording.
Video CD	COMPACT disc DIGITAL VIDEO	• Video-CD format
CD-DA	COMPACT disc DIGITAL AUDIO	• CD-DA format
CD-R	COMPACT disc Recordable	• CD-DA format • Video-CD format • MP3/WMA/JPEG file and finalized*.
CD-RW	COMPACT disc Rewritable	

- Discs played 8 cm (3″) or 12 cm (5″)
- * A process that allows play on compatible equipment.

Discs which cannot be played with this unit

- DVD with Region No. other than “1” or “ALL”
- DVD of PAL system
- DVD-ROM
- DVD-AUDIO
- DVD-RW
- DVD+RW
- CD-ROM
- CDV
- CVD
- CD-G
- CD-TEXT
- SACD
- Photo-CD

Definition of Terms

Angle
Some DVD discs feature scenes simultaneously shot from different angles. The ANGLE button can be used to view the scene from different angles. (ANGLE Indicator lights up on the unit when a scene recorded at different angles is detected.)

Chapter Number
Titles are subdivided into numbered sections. You can quickly search for a favorite scene using these numbers.

DVD
A high-density optical disc on which high-quality pictures and sound have been digitally recorded. DVD incorporates new video compression technology (MPEG II) and high-density recording technology which allow entire movies to be recorded with incredible playback quality.

Playback Control
With Video CD (version 2.0), scenes or information may be selected for viewing or listening from an interactive menu that appears on the TV screen.

Subtitles
Written dialogue which appears at the bottom of the screen.

Time Number
The elapsed play time from the start of a disc or title. Use to quickly find scenes. (May not work with some discs.)

Title Number
For DVD discs with two or more titles, the title is numbered as title 1, title 2, etc.

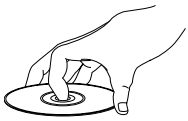
Track Number
Numbers assigned to tracks on Video CDs and CDs to allow specific tracks to be quickly located.

Video CD
CD containing picture and sound with same quality level as video tape. This unit also supports Video CDs with playback control (version 2.0).

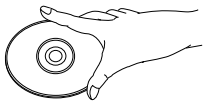
Disc Handling

Handling precautions

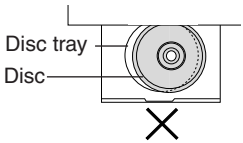
- Sticking a label on the disc may impair DVD-R playback.
- Do not attach sticker to discs. (Do not use discs with exposed adhesive from tape or left over peeled-off stickers.)
- Only hold disc by edges as shown. Fingerprints, dirt, and scratches can cause skipping and distortion.



- Do not write on label side of disc.

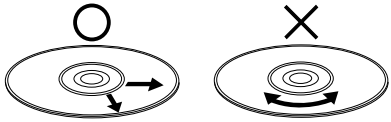


- Never use record cleaning sprays, benzine, thinner, static electricity prevention liquids, or any other solvent.
- Be careful not to drop or bend disc.



- Do not place more than 1 disc on disc tray.
- Do not try to close disc tray when disc is not properly placed.
- Always store discs in their proper cases when not in use.

To clean disc surface
With a soft, damp (water only) cloth, gently wipe from the center hole to the outer edge as shown below. (Wiping in a circular pattern will scratch the surface.)



If disc is brought from a cold to a warm environment, moisture may form on the disc
Wipe away moisture with a soft, dry, lint-free cloth before using disc. (See above.)

Improper disc storage
Discs could be damaged if stored or left in areas:

- exposed to direct sunlight.
- that are humid or dusty.
- near heat (i.e. heater, radiator, etc.).

IP- I◀◀
ips back one
previous menu scr
the desired recording. Loc
oint of recording.

PLAY
Begins playback.

SKIP+ ▶▶I /CM S
Skips one chap
screen. In St
"0:00:00." I
minutes

Fo

LIGHT button:

When LIGHT is pressed, (DVD, TV/VCR, DSS/CABLE, CH UP/DOWN, VOL UP/DOWN) buttons will light for 5 seconds for easy button location.

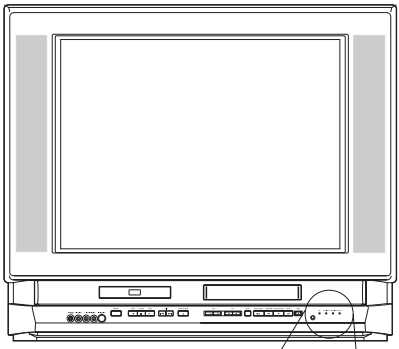
If no button is pressed in 5 seconds, the light goes out to conserve the batteries.

EJECT/OPEN/CLOSE button:

When this button is pressed in TV-VCR mode, the tape is ejected.
This button is inoperative if pressed during recording.
If pressed in DVD mode, the disc tray opens or closes.

Indicators on the Front Panel

<Model PV-DF2703 unit shown>



REC Indicator (RED)
Lights during recording. In Rec Pause or OTR Pause mode, the indicator flashes.
Pg 18.

Remote Sensor

ON TIMER Indicator (ORANGE)
Lights when the On-Timer is set.
Pg 26.

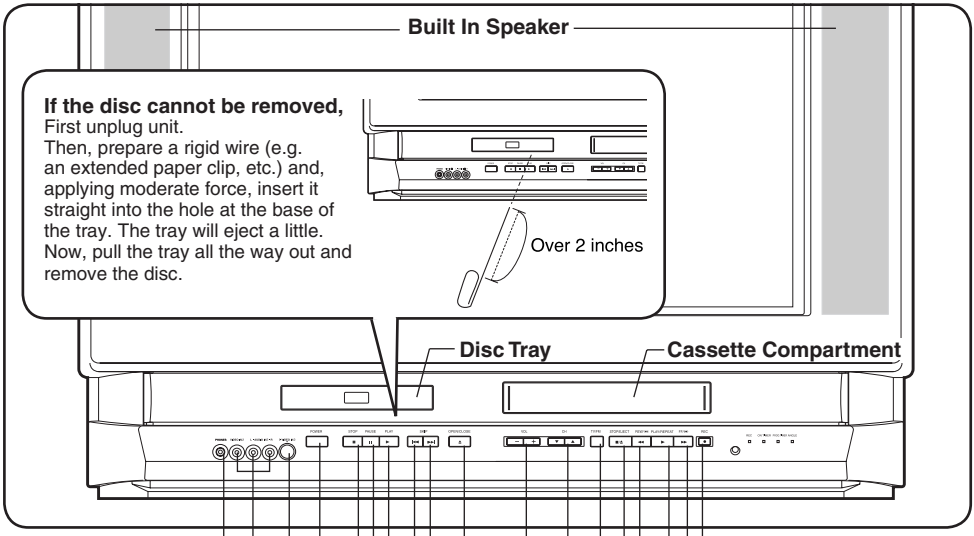
ANGLE Indicator (RED)
Lights when a scene recorded at a different angles is detected. (DVD only).
Pg 49.

PROG TIMER Indicator (GREEN)
Lights when the unit is set for Timer Recording. It flashes when a Timer Recording has been set with no tape inserted, the clock is not set, or the tape is in motion.
Pg 30.

Location of Controls (continued)

Front View of the unit

<Model PV-DF2703 unit shown>


Built In Speaker
If the disc cannot be removed,
First unplug unit.
Then, prepare a rigid wire (e.g. an extended paper clip, etc.) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc.
Over 2 inches
Disc Tray
Cassette Compartment

Phones Jack
Connect an earphone or headphones.

Audio/Video Input Connector 2 (LINE 2)
Connect from other component.

S-Video Input Connector 2 (LINE 2)
Connect from other component with S-Video.

POWER
Turns the unit on or off.

Disc Operation

STOP
Stops playback.

PAUSE
Pauses picture in Playback mode and frame advance picture in Still mode.

PLAY
Begins playback.

SKIP |◀◀
Skips back one chapter or track.
Goes to previous menu screen.

SKIP ▶▶|
Skips one chapter or track.
Goes to next screen.

OPEN/CLOSE
Opens or closes the disc tray.

Tape Operation

REC
Records a program.

FAST FORWARD/SEARCH
Fast forwards tape and forward visual search. Increases slow motion speed in Still mode.

PLAY
Begins playback.
REPEAT
Set to see a recording over and over.

REWIND/SEARCH
Rewinds tape and searches reverse scene. Decreases slow motion speed in Still mode.

STOP
Stops playback.
EJECT
Eject the tape.

TV/FM
Sets to TV/FM mode.

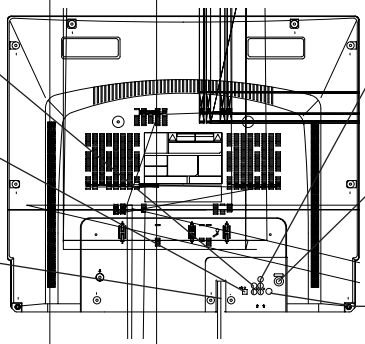
CHANNEL UP/DOWN
Selects a channel.
TRACKING UP/DOWN
Reduces picture noise during Playback and Slow Motion.

VOLUME UP/DOWN
Adjusts volume.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

Rear View of the unit

<Model PV-DF2703 unit shown>



Audio Output Connector (L/R)
Pg. 12

Optical digital audio output connector
Pg. 12

AC Power Plug
When plugged into an AC outlet, this unit consumes 3.5 W of electric power in OFF condition.

Audio/Video Input Connector 1 (LINE 1)
Connect from other component.

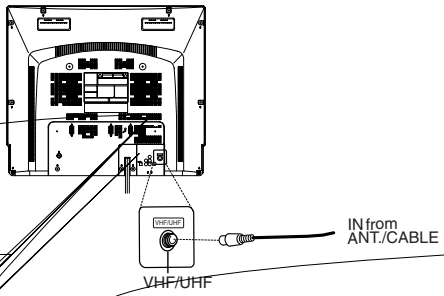
VHF/UHF Antenna Input Terminal
See below.

S-Video Input Connector 1 (LINE 1)
Connect from other component with S-Video.

Connections

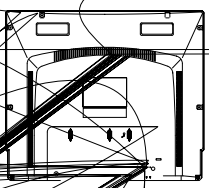
For ANT./Cable

Connect the cable from Antenna/Cable to the VHF/UHF terminal on the unit.



For DSS/Cable Box

Connect the OUT jack on your cable box to the VHF/UHF terminal on the unit with a RF cable.

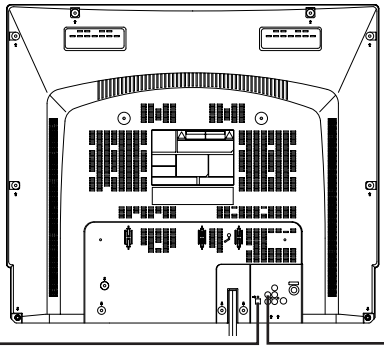


WARNING
Overtightening "Nut type" RF coaxial cables may damage jacks. Finger tighten only.

Connections (continued)

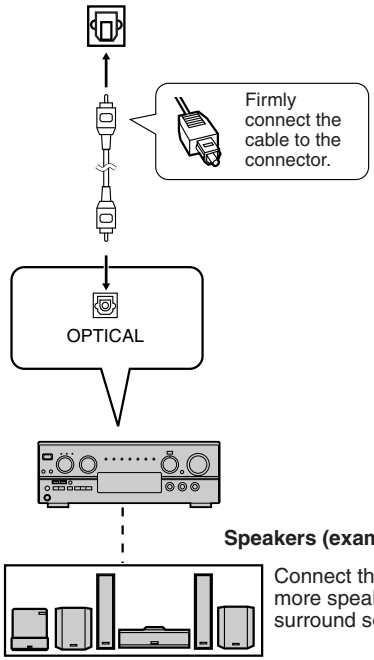
Audio connections

Enjoy the powerful movie theater and hall-like sound available with multiple channel audio found on DVDs by connecting an amplifier and speakers. There are two types of connection, digital and analog.



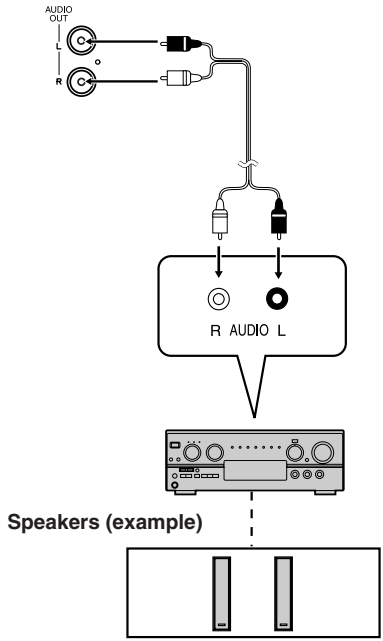
■ Digital connection

Connect an amplifier with Dolby Digital and DTS decoders to enjoy surround sound. You can also enjoy stereo sound with sampling frequencies of 48 kHz if the material is not copy-protected and the equipment you connect is compatible with these signals.



■ Analog connection

Connect an amplifier to enjoy high-quality stereo sound with sampling frequencies of 96 kHz.



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☑ Check List

- ☐ Turn down the volume, then turn this unit, as well as other equipment to be connected, off before proceeding with connection.
- ☐ Do not block ventilation holes of any equipment and arrange them so that air can circulate freely.
- ☐ Read through the instructions before connecting other equipment.
- ☐ Ensure that you observe the color coding when connecting audio and video cables.

Enjoying digital audio output from the digital audio output connector

Notes on audio output from the optical digital audio output connector

Disc	Sound recording format	Optical digital audio output from connector
DVD	Dolby Digital	Dolby Digital bitstream (1-5.1 ch) or PCM (48 kHz sampling/16 bit only)*1
	Linear PCM (48/96 kHz 16/20/24 bit)	Linear PCM (2ch) (48 kHz sampling/16 bit only)*2
	dts	Bitstream or PCM (48 kHz sampling/16 bit only)*1
Video CD	MPEG 1	PCM (44.1 kHz sampling)
CD	Linear PCM	Linear PCM (44.1 kHz sampling)
MP3	MP3	Linear PCM (It depends on the MP3 file)
WMA	WMA	Linear PCM (It depends on the WMA file)

*1 The type of audio output from the connector can be selected by the Settings for DVD Operation. (See page 61.)

*2 Sound having 96 kHz sampling is converted into 48 kHz sampling when it is output from the unit's optical digital audio output connector.

For your reference:

- Dolby Digital is a digital sound compression technique developed by the Dolby Laboratories Licensing Corporation. Supporting 5.1-channel surround sound, as well as stereo (2-channel) sound, this technique enables a large quantity of sound data to be efficiently recorded on a disc.
- Linear PCM is a signal recording format used in CDs. While CDs are recorded in 44.1 kHz/16 bit, DVDs are recorded in 48 kHz/16 bit up to 96 kHz/24 bit.
- If you have a Dolby Pro Logic Surround decoder, you will obtain the full benefit of Pro Logic from the same DVD movies that provide full 5.1 channel Dolby Digital soundtracks, as well as from titles with the Dolby Surround mark. For information on Panasonic or Technics Dolby Pro Logic Surround Sound Decoders please contact your local dealer.

IMPORTANT NOTE:

Caution for optical digital audio output connector:

- When connecting an amplifier (with an Optical digital input connector) which does not contain the Dolby Digital or dts decoder, be sure to select "PCM" at "Dolby Digital" and "PCM" at "dts" of the Settings for DVD Operation "AUDIO OUTPUT" (see page 61). Otherwise, any attempt to play DVDs may cause such a high level of noise that it may be harmful to your ears and damage your speakers.
- When a dts decoder is connected, please select "Bitstream" at "dts" of the Settings for DVD Operation "AUDIO OUTPUT." If "PCM" is selected, there will be stereo sound. (See page 61).
- Video CDs and CDs can be played as usual.

Note

- Some dts decoders which do not support DVD-dts Interface may not work properly with the unit.

Manufactured under license from Digital Theater Systems, Inc. US Pat. No. 5,451,942, 5,956,674, 5,974,380, 5,978,762 and other world-wide patents issued and pending. "DTS" is a registered trademark of Digital Theater Systems, Inc. Copyright 1996, 2000 Digital Theater Systems, Inc. All rights reserved.

Manufactured under license from Dolby Laboratories. "Dolby" and the double-D symbol are trademarks of Dolby Laboratories.

Initial Setup (Ready to Play)

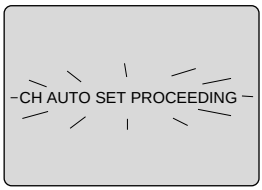
Please make all cable or antenna connections before powering on.

Initial Setup (Ready to Play)

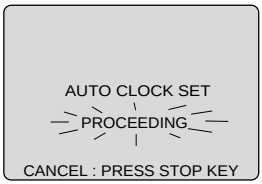
Press TV/VCR on the remote for TV-VCR mode.

1 **Plug the unit power cord into an AC wall outlet.**

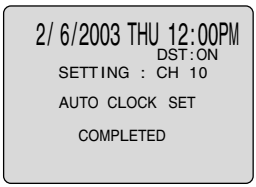
2 **Press POWER* on the remote or unit. The unit comes on and auto channel and clock set starts.**



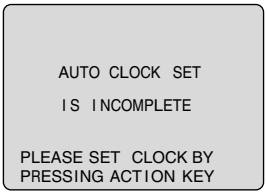
- If you use a cable box, turn it on and set it to the Public Broadcasting Service (PBS) channel in your time zone. If you use a DSS receiver, it must be turned off.

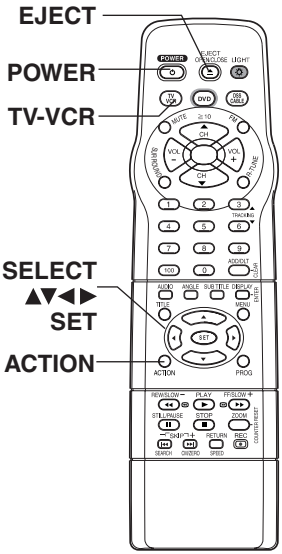


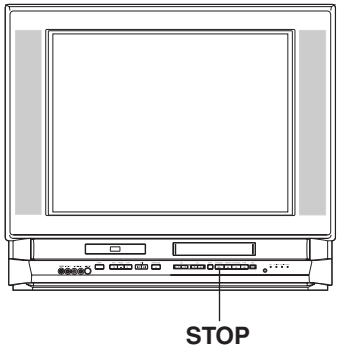
3 **Settings are made automatically. When setup is done, this screen appears.**



If AUTO CLOCK SET IS INCOMPLETE screen appears, set the clock using MANUAL CLOCK SET procedure on next page.





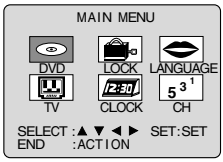


Notes

- Function buttons are inoperative during Initial Setup.
- To remove a cassette during Auto Set, press EJECT twice on the remote or STOP twice on the unit. In this case, settings must be made manually. (See pages 16-17.)
- Depending on conditions, Auto Clock Set may take longer than 30 minutes. If so, press STOP to stop setup and perform settings manually. (See pages 16-17.)

Reset Language, Channels, Clock,

1

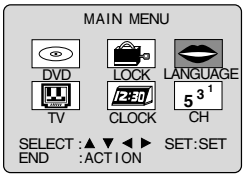


Press ACTION*
to display MAIN MENU.

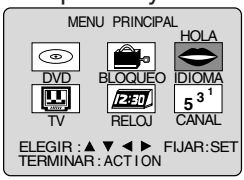
2

■ Language

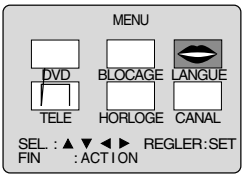
1) **Press ▲▼◄►** to select language icon.



2) **Press SET** repeatedly.



For Spanish



For French

For English

3) **Press ACTION** to exit.

■ Channels

1) **Press ▲▼◄►** to select “CH.”

2) **Press SET.**

3) **Press ▲▼** to select “ANTENNA,” then **press SET** to set your antenna system (“TV” or “CABLE”).

4) **Press ▲▼** to select “AUTO SET,” then **press SET**.

- After Channel Auto Set is finished, Clock Auto Set will be performed.
  (If clock is set manually, Clock Auto Set will not be performed.)

■ Clock

1) **Press ▲▼◄►** to select “CLOCK.”

2) **Press SET**.

(“TIME ZONE ADJUST” appears only when auto clock is set.)

3) **Press ▲▼** to select “MANUAL,” then **press SET**.

(For Auto Clock Set, select “AUTO CLOCK SET,” and **press SET**.)

<Example MANUAL CLOCK SET screen>

Continued on the next page.

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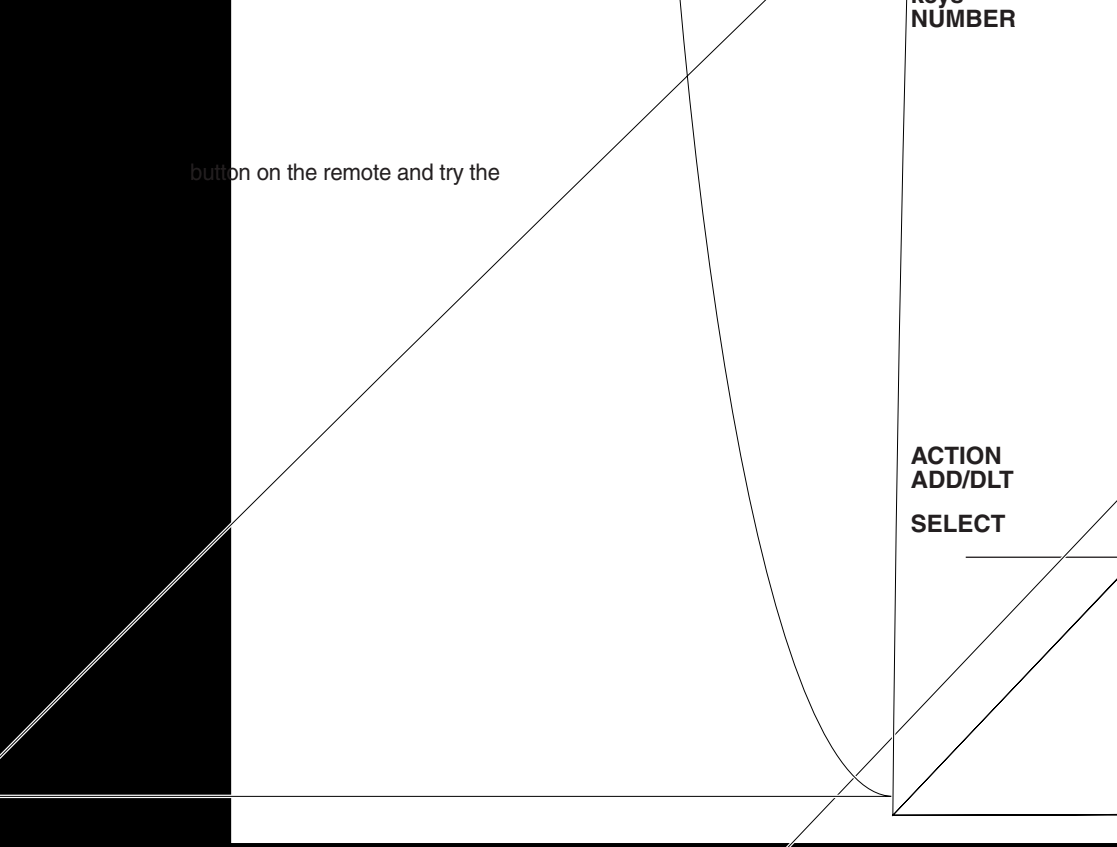
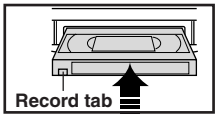
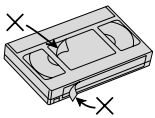

NUMBER
button on the remote and try the
ACTION
ADD/DLT
SELECT

Playback a Tape

1 **Insert a cassette.**
- The unit power comes on automatically.



To prevent tape jam,
remove loose or peeling labels from tapes.



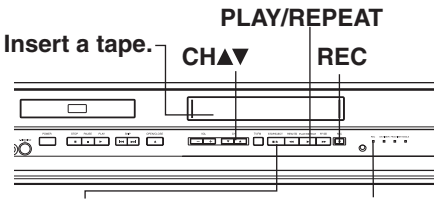
2 **Press PLAY*** to play a tape.
- If tape has no record tab (see page 4), auto play begins.

■ **Forward/Reverse scene search**
→ **Press FF/SLOW+** or **REW/SLOW-**.
→ **Press** again or **PLAY** to release.
■ **Still (Freeze) picture**
→ **Press STILL/PAUSE**.
→ **Press PLAY** to release.
■ **Slow Motion picture**
→ **Press FF/SLOW+** (increases speed) or **REW/SLOW-** (decreases speed) in Still mode.
→ **Press PLAY** to release.
■ **Frame by Frame picture**
→ **Press STILL/PAUSE** in Still mode.
→ **Press PLAY** to release.

- These features work best in SP or SLP mode.
- After the unit is in Still or Slow mode for 3 minutes, it will switch to Stop mode automatically to protect the tape and the video head.

■ **Stop → Press STOP**
■ **Rewind tape → Press REW/SLOW-** in Stop mode
■ **Fast forward tape → Press FF/SLOW+** in Stop mode
■ **Eject tape → Press EJECT** on the remote or **STOP/EJECT** on the unit

Operation using unit buttons



Record On a Tape

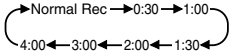
1 **Insert a tape with record tab.**
- The unit power comes on automatically.

2 **Press CH▲▼** or **NUMBER keys** to select a channel.
- For "LINE" input, see bottom of next page.

3 **Press SPEED** to select recording speed (see page 4).
SP = Standard Play
LP = Long Play
SLP = Super Long Play
- Selected speed is displayed.

4 **Press REC** to start recording.
- To edit out unwanted portions, **press STILL/PAUSE** to pause and resume recording.
- You cannot view another channel during recording.

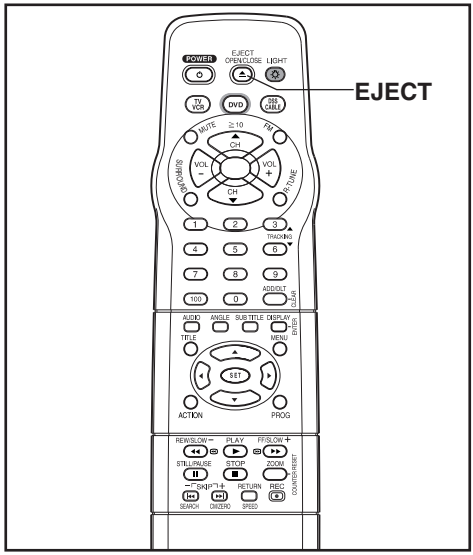
■ **Stop → Press STOP**
■ **One Touch Recording (OTR)**
[recording in progress]
Press REC
repeatedly to set the recording length (30 min - 4 hours.)



- The unit stops recording at a preset time.
- PROG TIMER Indicator lights on the unit.

• It is not possible to record from DVD/Video CD/CD to VHS tape using this unit.

- After the unit has been in Rec Pause mode for 5 minutes, it will stop automatically to protect the tape and the video head.
- The remaining recording time of an OTR can be displayed by pressing DISPLAY.



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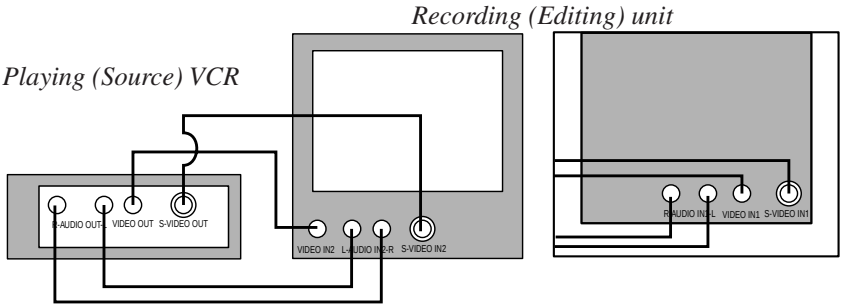
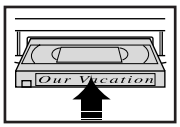
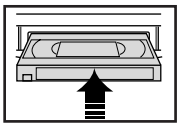
Copy Your Tapes (Dubbing)

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

Connections you'll need to make


Recording (Editing) unit
Playing (Source) VCR
R-AUDIO OUT-L VIDEO OUT S-VIDEO OUT
VIDEO IN2 L-AUDIO IN2-R S-VIDEO IN2
R-AUDIO IN1-L VIDEO IN1 S-VIDEO IN1

If cables are connected to both connectors (S-VIDEO IN or VIDEO IN), the S-VIDEO signal will be selected automatically. (The S-VIDEO signal has priority.) If you would like to display the VIDEO signals being input to the VIDEO IN connector, do not connect any cables to the S-VIDEO IN connector.

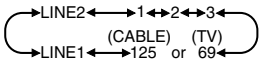
Playback (Source)	Recording (Editing) unit
1  **Insert pre-recorded tape.**	 **Insert blank tape with record tab.** • Dubbing tapes protected with Copy Guard will have poor quality results.
2 ———	**Select "LINE" mode.** See "Selecting Input Mode" below.
3 **Press PLAY** then **press PAUSE** at starting point to put in Standby mode.	**Press REC**, then **press STILL/PAUSE** immediately to put in Standby mode.
(Perform operation of steps 4 and 5 on both units at same time.)	
4 **Press PLAY** to start dubbing.	**Press STILL/PAUSE** to start dubbing.
5 **Press STOP** to stop dubbing.	**Press STOP** to stop dubbing.

Caution

- Unauthorized exchanging and/or copying of copyrighted recordings may be copyright infringement.
- Please note that some tapes cannot be dubbed on this unit. Also, it is not possible to dub DVD/Video CD/CD to VHS tape using this unit.

Selecting Input Mode

Method 1:
Press CH▲▼. The display will change as follows.

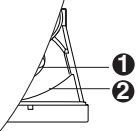


Method 2:
a Press ACTION for MAIN MENU.
b Press ▲▼◄► to select "TV," then **press SET** for SET UP TV screen.
c Press ▲▼ to select "INPUT SELECT," and then **press SET** to select "TUNER," "LINE1" or "LINE2."
d Press ACTION twice to exit this mode.

Ba

■
■

into disc tray



- Hold disc by its edges only (pag 7) with printed side up and use guides to place into tray. Use ❶ 3″(8 cm) or ❷ 5″ (12 cm) disc.

–

ss

*Important: If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

■ Forward/Reverse rapid scene search

→ **Press FF/SLOW+** or **REW/SLOW-** during play.

→ **Press PLAY** to release.

- Starting forward/reverse search during play started from menu on Video CDs may recall menu.
- Search speed, slow at first, increases with each additional press of the button up to 5 levels.

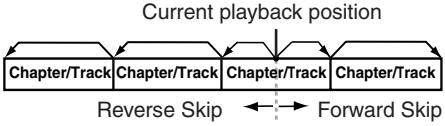
■ Forward/Reverse Chapter/Track Skip

→ **Press SKIP+ ▶▶|** or **SKIP- |◀◀** during play.

Each **press skips** a chapter (DVD) or track (Video CD/CD).

Pressing SKIP- |◀◀ once midway through a chapter/track returns to start of that chapter/track. Each additional press skips back one chapter/track.

- **Pressing SKIP+ ▶▶|** or **SKIP- |◀◀** during play started from menu on Video CDs may recall menu.



■ Still (Pause) Picture

→ **Press STILL/PAUSE** during play.

→ **Press PLAY** to release.

- **DVD/Video CD :** The unit will enter Still picture mode.
- **CD :** The unit will enter Pause mode.

■ Frame by Frame picture (DVD/Video CD)

→ **Press STILL/PAUSE** in Still mode.

→ **Press PLAY** to release.

- Each press advances picture one frame.
- Hold down for consecutive frame advance.
- Whether pictures are advanced by “FRAME” or “FIELD” is selected automatically (see page 62).

■ Slow Motion picture (DVD/Video CD)

→ **Press FF/SLOW+** or **REW/SLOW-** (DVD only) in Still mode.

→ **Press PLAY** to release.

- Slow motion speed, slow at first, is increased with each additional press of the button up to 5 levels.
- Reverse slow motion is not available for video CDs.
- When ⊘ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.

RESUME function

The unit memorizes the point where STOP is pressed (STOP ▶ display on the screen). **Press PLAY** to resume play from this point. **Pressing STOP** again or opening the tray cancels RESUME, however, RESUME is not canceled when power is turned off and on.

- RESUME works only with discs for which elapsed play time is displayed during play.

Auto-Power Off function

Power turns off after unit has been in Stop mode (DVD) for about 5 minutes.

Enjoy Video CDs featuring playback control without using menus (Video CDs only)

1. Do steps 1-3 (previous page).
   When menu appears, **press STOP**.
2. **Press NUMBER key(s)** to select desired track (play begins).
   - Check disc for track numbers.
   - Press “1” to start at beginning of disc.

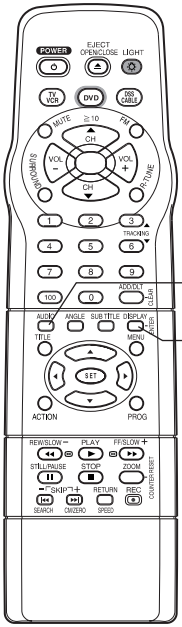
To Resume Menu use,
Press STOP, and **press PLAY**, then the menu appears. Now, go to step 4 (previous page).

Notes

- Please read the disc jacket for operation information.
- If a single sided disc is placed in upside down, “THIS TYPE OF DISC CANNOT BE PLAYED. PLEASE INSERT A DIFFERENT DISC” is displayed.
- Remove disc and press unit POWER off when not in use.
- Disc continues to rotate with menu displayed even after play is done. Press STOP to clear menu display when finished with menu.

MTS Broadcast/TV Stereo System

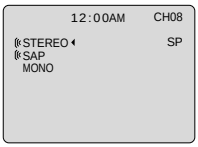
Equipped with dbx®-TV Noise Reduction for true MTS reproduction. dbx®-TV Noise Reduction is required for good stereo separation and audio fidelity.
dbx® is a registered trademark, and is licensed by dbx® Technology Licensing.



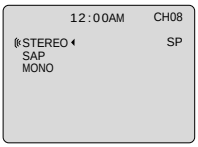
Receivable Broadcast Types

The following are possible audio broadcast types and on-screen displays. The signal being received is indicated with an " " mark while the selected audio mode is indicated with an arrow. To change the audio mode for these broadcasts, see the "Audio Mode for TV Viewing" section below.

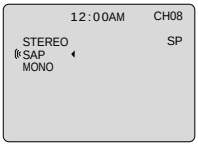
Press DISPLAY to display the broadcast signal being received.



MTS Stereo and SAP broadcast
Multi-channel Television Sound Stereo (main language) and Secondary Audio Program (sub language) broadcasts are being received simultaneously. Select the STEREO or SAP audio mode.



MTS Stereo broadcast
Multi-channel Television Sound Stereo broadcast. Select STEREO audio mode.
- If stereo broadcast is weak and the display flickers, select MONO audio mode for possible improvement.



SAP broadcast
Secondary Audio Program (sub language). Select SAP audio mode for the sub language.

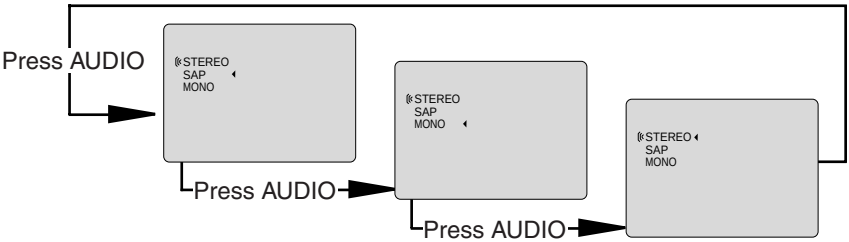
MONO broadcast
Normal monaural sound broadcast.

Audio Mode for TV Viewing

Press AUDIO to select the desired audio mode as described above.
(Arrow shows selection.)

- Each press of AUDIO will change the audio mode as shown below.
- "SAP" is selected with first press of AUDIO.

< Example >



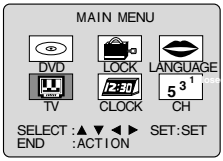
Closed Caption is ...

This multi-use system not only allows the hearing impaired to enjoy selected programs, but also makes useful information from TV stations available to everyone.

Closed Caption Mode Feature

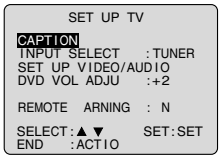
1 **Press ACTION*** to display MAIN MENU.

2



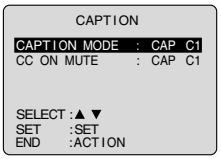
1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

3



1) **Press ▲▼** to select "CAPTION."
2) **Press SET** to display CAPTION screen.

4



1) **Press ▲▼** to select CAPTION MODE.
2) **Press SET** repeatedly to select mode. (See left.)

5 **Press ACTION** three times to return to the normal screen.

Closed Caption Mode Selections

Caption Mode: CAP C1 or C2
A narration of selected TV programs is displayed.
Check TV program listings for CC (Closed Caption) broadcasts.

Caption Mode: TEXT C1 or C2
Most of the screen will be blocked out. When the TV station broadcasts information, such as program listings, it will appear in this space.

Caption Mode: OFF
Closed Caption/Text narration will not be displayed.

Notes

- The closed caption or text signal may be broadcast over C1, C2, or both. Also, text contents can vary so you may wish to try different settings.
- While recording one station and watching another, Captioning will not be displayed.

Recording and Playing Back a Closed Caption/Text Program

Record : Record normally. Closed Caption/Text signal, if present, is recorded automatically.

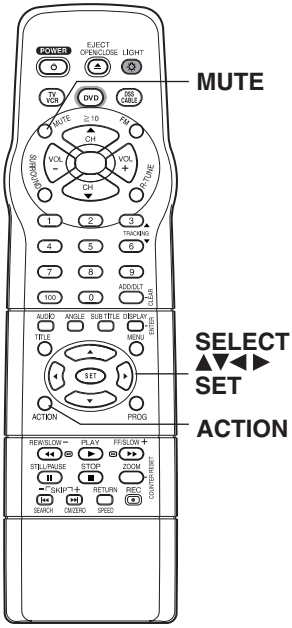
Playback : Start playback. Perform above steps to select desired caption mode.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

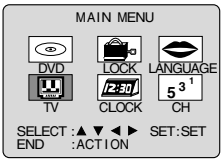
Caption On Mute Feature

Closed Caption narration, if available, is displayed when MUTE button is pressed for silence.



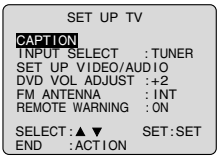
1 **Press ACTION** to display MAIN MENU.

2



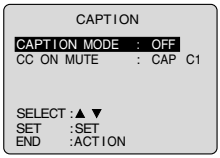
1) **Press ▲▼◀▶** to select "TV."
2) **Press SET** to display SET UP TV screen.

3



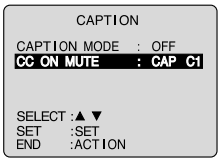
1) **Press ▲▼** to select "CAPTION."
2) **Press SET** to display CAPTION screen.

4



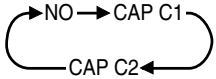
1) **Press ▲▼** to select CAPTION MODE.
2) **Press SET** repeatedly to select "OFF."

5



1) **Press ▲▼ to** select CC ON MUTE.
2) **Press SET** repeatedly to select desired mode.

- Each **press of SET** will change the display as shown left.
- The caption may be broadcast over CAP C1 or C2.



6 **Press ACTION** three times to return to the normal screen.

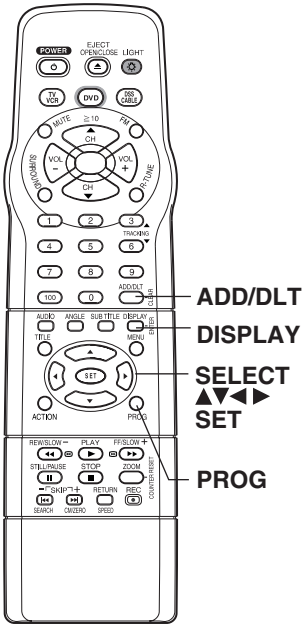
7 **Press MUTE** to mute the sound and display closed captioning.
- To cancel, **press MUTE** again.

Note

- When a disc supporting closed caption is used, the subtitle and the closed caption may overlap. In this case, turn the subtitle or caption on mute mode off. (See page 48.)

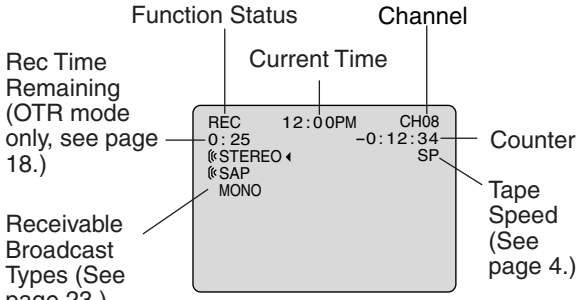
On-Screen Display (OSD)

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.



TV/VCR Status & Clock Display

Press DISPLAY to display or remove the overlay.

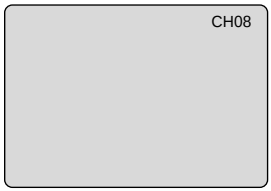


Blue Screen Display

Whenever a blank section of a tape comes up in Playback mode, or when the selected channel has no broadcast signal with the Weak Signal Display Feature set to “OFF” (see page 38), the screen will turn solid blue.

Channel & Function Display

When a function button is pressed (PLAY, FF, etc.) or you change channels, the unit mode or channel number will be displayed.



FM Radio

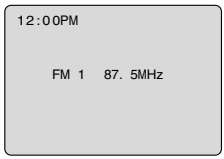
FM Radio is ...

This unit has an FM radio with built-in antenna, 9 station preset, and a band range of 87.5 ~ 108.1 MHz. You can set the On-Timer (page 26) to wake up to your favorite radio station.

FM Radio Setup

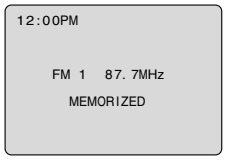
1 **Press FM*** on the remote or **TV/FM** on the unit to display FM radio mode.

2



Press a NUMBER key (1~9) to select the FM preset number.

3



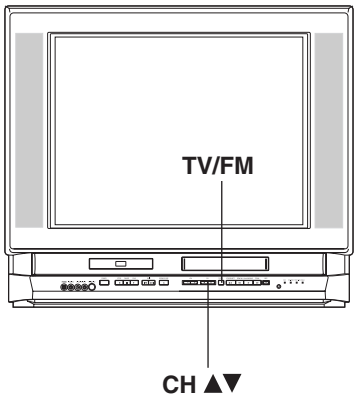
1) **Press CH ▲▼** to select the desired radio station. (Each press changes frequency by 200 kHz.)
2) **Press ADD/DLT** to set the radio station.

Hold down CH ▲ or ▼ for a few seconds, then release to quickly scan for FM stations in your area.

- To cancel, **press CH ▲ or ▼** while in search mode.

To Make Corrections, select station with a NUMBER key, then do step **3** again.

To exit FM mode, press TV/VCR or **DVD** on the remote or **TV/FM** on the unit.

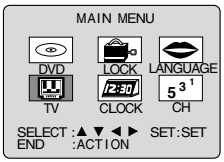


FM Antenna Setup

Make sure FM tuning is done correctly (see FM Radio Setup).

1 **Press ACTION** to display MAIN MENU.

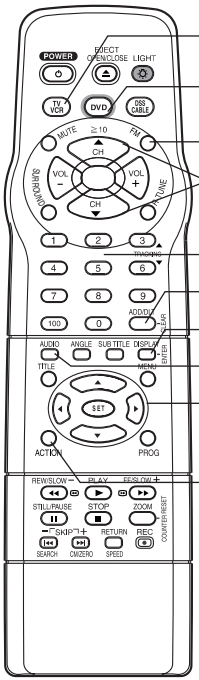
2



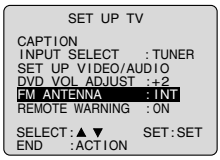
1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

Continued on next page.

*Important: If a remote control button does not work when pressed, press the FM button on the remote and try the button again.



3



1) **Press ▲▼** to select FM ANTENNA.
2) **Press SET** to select "INT (INTERNAL)" or "EXT (EXTERNAL)" to determine which one sounds best.

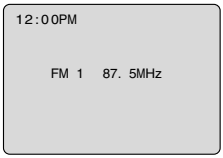
■ **For cable TV users → "INT"**
■ **For antenna users → "EXT"**

4 **Press ACTION** twice to end setup.

Using FM Radio

1 **Press FM** on the remote or **TV/FM** on the unit to display FM radio mode.

2



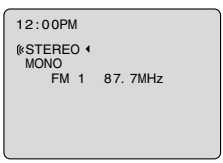
Press a NUMBER key (1~9) to select a preset FM number (see FM Radio Setup on page 28).

To exit FM mode, press TV/VCR or DVD on the remote or **TV/FM** on the unit.

Notes

- FM radio cannot be recorded on a Video cassette.
- You may get better reception by repositioning the unit.
- You cannot select FM Radio mode during playback or record, or while a blue back screen (PROG, ACTION, MENU) is displayed.
- Once stations are set, the selected station and current time are displayed when FM Radio mode is entered. To remove time, press DISPLAY. If DISPLAY is pressed again, the unit status screen appears.

Audio Mode for FM Radio



Press AUDIO repeatedly to select "STEREO" or "MONO" in FM Radio mode.

Timer Recording

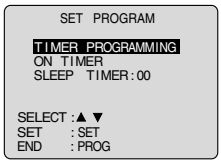
You can set up to 8 programs to be recorded while you are away.

Check List

- ☐ Cable or antenna is connected.
- ☐ Power cord is plugged in.
- ☐ The clock is set to correct time.
- ☐ The tape is long enough.
- ☐ The record tab is in place.

1 **Press PROG*** to display SET PROGRAM screen.

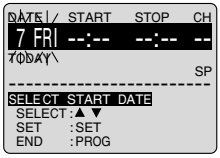
2



1) **Press ▲▼** to select TIMER PROGRAMMING.
2) **Press SET** to display screen.

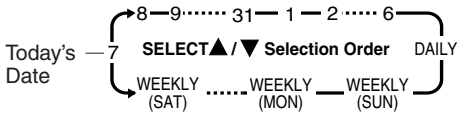
- If a program is already in memory, **press ▲▼**, and **SET** to select an unused program number.

3



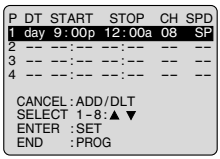
Press ▲▼ to select and **SET or ◀▶** to set the recording DATE.
- 1~31 = One time
- DAILY = MON~FRI
- WEEKLY SUN~SAT = Same time once a week

Example



Repeat step 3 to set:
- Start time, Stop time
- Channel (or LINE for outside source)
- Speed (SP, LP, SLP)

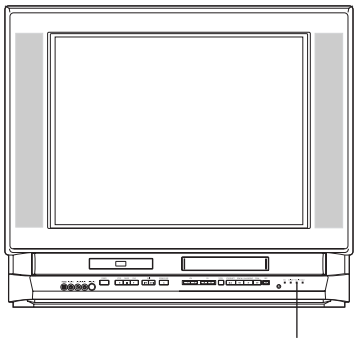
4



Press PROG to end the program.

To Enter More Programs, press ▲▼ to select and **SET** to set a blank program number, and then repeat step 3.

5 **Press PROG** twice to exit this mode.
- If you're using a cable box, make sure that it is tuned to the desired channel and the power is left on for timer recording.
- PROG TIMER Indicator lights up on the unit.



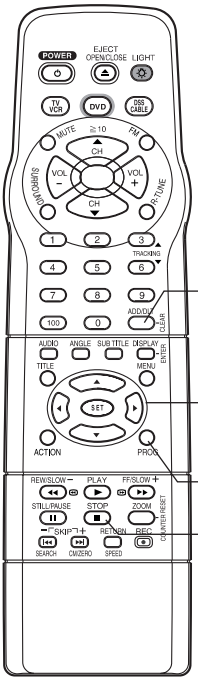
PROG TIMER Indicator

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

Cancel a Timer Recording: (Recording is in progress)

Hold down STOP for a few seconds to cancel the Timer Recording.

- Any future daily or weekly recordings will be performed as programmed.



Review, Replace or Clear Program Contents : (Recording is not in progress)

1 **Repeat steps 1 and 2 on page 30.**

2

```
P DT START   STOP   CH SPD
1 day  9:00p12:00a 08  SP
2  8 10:00a12:00p125   SP
3 10  8:00p 9:00p 10   SP
4 SU  9:00p10:00p  L   LP

 CANCEL:ADD/DLT
 SELECT 1-8:▲▼
 ENTER :SET
 END   :PROG
```

Press ▲▼ to select the desired program.

3 **To Replace program...**

```
DATE / START   STOP   CH
8 SAT  9:00P 12:00A  08
TODAY
                     SLP
-----------------------
SELECT START DATE
 SELECT:▲▼
 SET   :SET      BACK:◀
 END   :PROG
```

1) **Press SET** to display.
2) **Press ▲▼** to select and **press SET** or **◀▶** to set new program contents.
3) **Press PROG.**

To Clear program...

```
P DT START   STOP   CH SPD
1 -- --:-- --:--   --  --
2  8 10:00p12:00a125   SP
3 10  8:00p 9:00p 10   SP
4 SU  9:00p10:00p  L   LP

 SELECT 1-8:▲▼
 ENTER :SET
 END   :PROG
```

Press ADD/DLT.

4 **Press PROG twice** to exit this mode.

Notes

- 2 minutes before Timer recording is performed, “PLEASE PREPARE FOR TIMER REC” appears and/or the PROG TIMER Indicator flashes. Be sure a cassette with record tab is loaded and the unit is in Stop mode.
- If the start times of two programs overlap, the lower numbered program will have priority.
- If the start time for a Timer Recording comes up during a normal recording or One Touch Recording (page 18), the Timer Recording will not be performed.
- If there is a power interruption of more than one minute, the recording may not be performed or continued.
- If “INCOMPLETE” appears after all items have been set, check all entries and make necessary corrections.

Cable Box Universal Remote Control Feature

Universal Remote Control is...

The Remote Control may be set up to control some basic DSS or Cable box functions.

The Universal Remote Control Setup

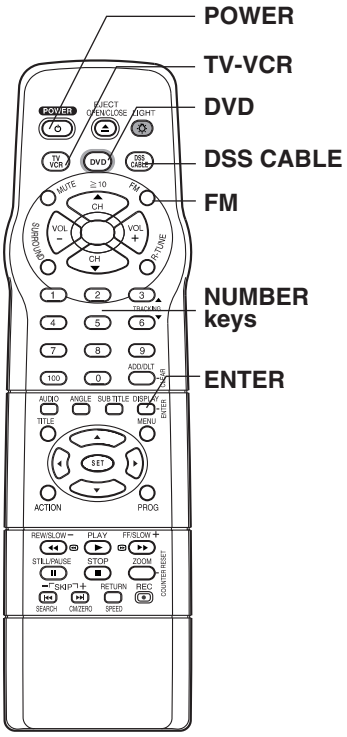
1 **Find your DSS box or Cable box Brand Code Number from one of the charts on the next page.**

2 **Set up remote. Hold down DSS CABLE and press NUMBER keys** to enter code.
- If code number is 100 or greater, e.g., press 1 - 0 - 2 for 102.

3 Confirm code entry. **Press POWER*** to turn selected unit ON or OFF.
- See below for controllable functions in each mode.

Notes

- Please repeat the Universal Remote Control Setup after replacing remote control batteries.
- The remote control will not operate all DSS receivers or Cable Boxes made by the manufacturers listed. If you get no results, your particular brand cannot be controlled.



Using the Universal Remote Control (Available Buttons / Functions)

Once the remote control has been properly set up, you can select TV-VCR, FM, DVD, DSS or CABLE mode depending on which functions you wish to control.

Press TV/VCR, FM, DVD or DSS CABLE on the remote control to select the desired mode. (See below for buttons available in each mode.)

Set to TV/VCR, FM, DVD:

All TV functions, as well as functions of TV-VCR, FM, or DVD.

Set to DSS CABLE:

- Basic VCR functions, e.g. PLAY, REC, etc.
- CABLE/DSS function, e.g. POWER, ENTER, NUMBER keys (except 100 key), CH UP/DOWN.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

*Important: If a remote control button does not work when pressed, press the TV/VCR, DVD, FM button on the remote and try the button again.

DSS Brand Code Numbers

Toshiba....90
Hitachi/ Hughes....91, 99
Primestar....92
Drake....93
Magnavox....94, 95
Uniden....94, 95
Optimus....94, 95
Panasonic....96
ProScan....97
RCA....97
SONY....98, 105

Cable Box Brand Code Numbers

Archer....44, 06, 01, 120, 05, 63, 126
Cableview....29, 09, 01, 63, 120, 44, 42, 30, 52, 04, 124, 126
Citizen....44, 52, 30, 63, 42, 04, 124, 126
Curtis....08, 09, 25, 61, 53, 87
Century....44, 51, 75, 59, 126
Cabletenna....29, 09, 01, 63, 120, 44, 126
Cable Cinema....29, 09, 01, 63, 120, 44, 126
Diamond....29, 09, 01, 63, 120, 44, 126
Eagle....62, 40, 22, 13, 58, 20, 26, 107
Eastern....28, 29, 130
Explorer....08, 09, 25, 61, 53, 87
Gemini....30, 04, 124
General Electric....01, 57, 120
General Instruments....01, 84, 83, 34, 03, 02, 04, 55, 65, 66, 67, 68, 120, 106, 121, 122, 115, 117, 118, 124
Gerrard....44, 51, 75, 59
GC Electronics....44, 42, 63, 29, 30, 52, 04, 124, 126
Hamlin....41, 14, 15, 28, 102, 104, 103, 130
Hitachi....31
Jerrold....01, 84, 83, 34, 03, 02, 04, 55, 65, 66, 67, 68, 120, 106, 121, 122, 115, 117, 118, 124
Jasco....30, 04, 124
Macom....31
Magnavox....26, 112
Matsushita....17, 16, 08, 87, 109
Movietime....32, 39, 42, 44, 126, 38, 40
Maestro....74, 35
NEC....40, 19, 38, 32
NSC....40, 19, 38, 32
Novavision....08, 09, 25, 61, 53, 87
Next Level....01, 84, 83, 34, 03, 02, 04, 55, 65, 66, 67, 68, 120, 106, 121, 122
Oak....46, 11, 129, 101
Oak Sigma....46, 11, 129, 101
Panasonic....17, 16, 08, 87, 109
Philips....23, 24, 20, 13, 07, 50, 128, 129
Pioneer....06, 05, 12
Pulsar....04, 42, 63, 44, 30, 52, 124, 126
Quest....06, 05, 12
Radio Shack....44, 51, 75, 59, 126
RCA....17, 16, 08, 87, 109
Realistic....44, 51, 75, 59, 126
Recoton....44, 51, 75, 59, 126
Regal....41, 14, 15, 28, 102, 104, 103, 130
Regency....28, 29, 130
Rembrandt....44, 42, 63, 29, 01, 32, 39, 120, 126
Samsung....42, 06, 32, 05, 40
Scientific Atlanta....08, 09, 25, 61, 53, 87
Sheritech....27
Signal....26, 112
SL Marx....42, 06, 32, 40, 43, 44, 52, 63, 126
Sprucer....17, 16, 08, 87, 109
Standard Components....32, 39, 42, 44, 126
Stargate....04, 42, 32, 40, 63, 44, 30, 52, 06, 124, 126
Sylvania....19, 18
Teknika....74, 35
Telecaption....77, 127
Teleview....40, 19, 38, 32, 42, 06
Texscan....19, 18
Tocom....34, 33, 01, 42, 66, 120
Toshiba....36
Unika....44, 42, 63, 29, 01, 126, 120
Universal....52, 43, 44, 63, 42, 126
Viewstar....62, 40, 22, 13, 58, 20, 26, 107
Videoway....07, 23, 50, 129
Vidtek....64
Zenith....07, 23, 50, 129

Notes

- In DSS or CABLE mode, it may be necessary to press ENTER after pressing NUMBER keys for channel selection.
- In DSS or CABLE mode, POWER, CH Up/Down, NUMBER Keys, ACTION, PROG, DISPLAY/ENTER, SEARCH/SKIP- I◀◀, R-TUNE, SELECT, SET, CM SKIP/ZERO/SKIP+ ▶▶I, COUNTER RESET/ZOOM, ANGLE, AUDIO, TITLE, SUB TITLE, MENU, or ADD/DLT are not available. Press TV/VCR, FM, DVD to use these functions.
- Depending on your DSS receiver or Cable box brand, some of the functions listed may not be remote controllable.
- Some DSS receiver or Cable box brands require you to turn on the power manually.
- Due to changes in infra-red commands used by manufacturers, some brands have several codes. If your unit does not respond to the first code, please try the next one.

Tape Operation

Search System is ...

Each time a recording is made, an invisible index mark is placed on the tape. When timer recordings are made, program index and information are also included. These index marks can be used to access or scan recordings.

Index Search

Go directly to the desired recording.

1

INDEX SEARCH

ENTER INDEX NUMBER:1
USING 1-9 KEYS

FORWARD SEARCH:FF
REVERSE SEARCH:REW

EXIT:SEARCH

Press SEARCH* in Playback or Stop mode to display INDEX SEARCH screen, and then **press NUMBER keys** to select the recording number.

- To calculate number, see below.

Press FF or **REW** to start search.

2

INDEX SEARCH

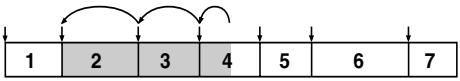
FORWARD SEARCH:FF
REVERSE SEARCH:REW

Playback begins at search end. To search forward or back 1 index, **press FF** or **REW** while screen left is displayed (10 seconds).

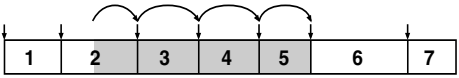
To cancel, press PLAY.

■ To calculate the Index Number

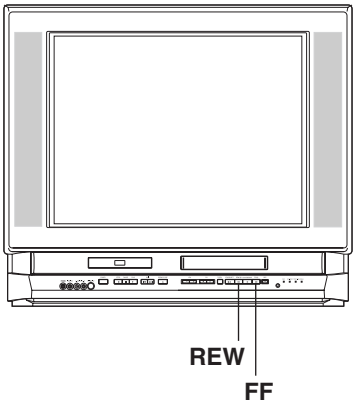
Example 1:
To go to rec. 2 from rec. 4, enter 3 and press REW.

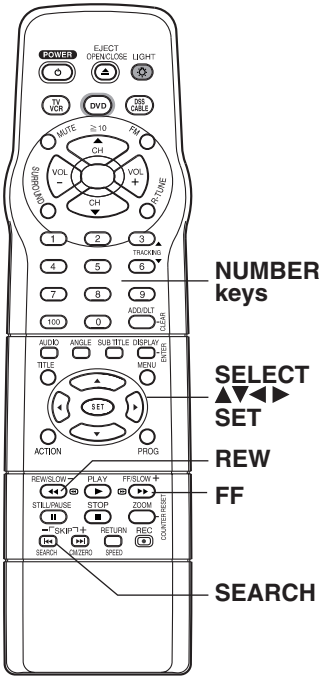


Example 2:
To go to rec. 6 from rec. 2, enter 4 and press FF.



NOTE: ↓ indicates start points of each recording.

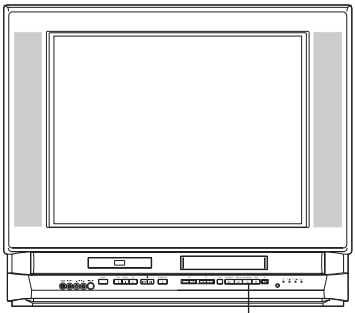




Note

- If Index Search is started very close to an index mark, that index mark may not be counted in the search.

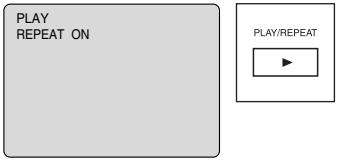
For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com



PLAY/REPEAT

Repeat Play

Set to see a recording over and over.



To turn “ON,”
press PLAY/REPEAT on the unit repeatedly in Playback mode to select “REPEAT ON.”

To turn “OFF,”
repeat above to select “REPEAT OFF.”

- Playback repeats when tape end is reached or an unrecorded portion longer than 30 seconds is detected.

Note

- For repeat play in DVD mode, see page 55.

⋆Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

Auto Operation Functions

■ Auto Shut Off

No broadcast signal in TV mode (Only when Weak Signal Display is set to OFF.), DVD stops, or blank tape is played for 5 minutes.

→ Power turns off

- This feature is canceled if any button is pressed during above conditions.

■ Auto Playback

Insert a tape in Power off mode

→ Power turns on

- Playback begins if tape has no record tab.

■ Auto Rewind (except for Recording)

Tape reaches its end

→ Rewind, → Stop

■ Playback Auto Eject (Repeat Play is "OFF")

Tape with no record tab reaches its end

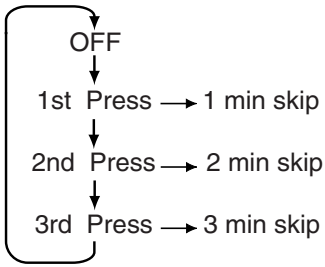
→ Rewind, → Stop, → Eject

Commercial Skip

By pressing the CM/ZERO button in Playback mode you can skip over 1 to 3 minutes of recorded tape in just a few seconds.

Press CM/ZERO repeatedly to select skip time in Playback mode.

- No indication appears.



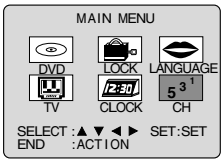
Special VCR Features

Weak Signal Display Feature

When “ON” is selected, the picture is displayed even when a broadcast signal is weak or non-existent.

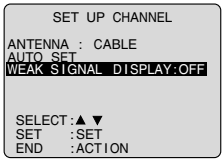
1 **Press ACTION*** to display MAIN MENU.

2



1) **Press ▲▼◄► to select “CH.”**
2) **Press SET to display SET UP CHANNEL screen.**

3



1) **Press ▲▼ to select WEAK SIGNAL DISPLAY.**
2) **Press SET to set “ON” or “OFF.”**

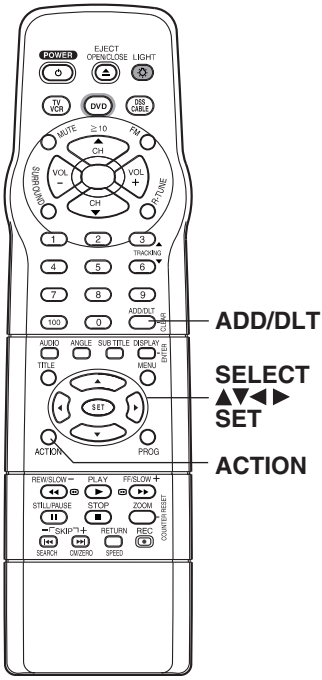
Notes

- “ON” = Picture is displayed regardless of signal condition, and may not always be clearly visible.
  “OFF”= Screen turns solid blue when signal is absent or weak.
- If unit is connected to equipment which has blue back feature, selecting “ON” will have no effect on the other equipment.

4 **Press ACTION** twice to return to the normal screen.

Check List

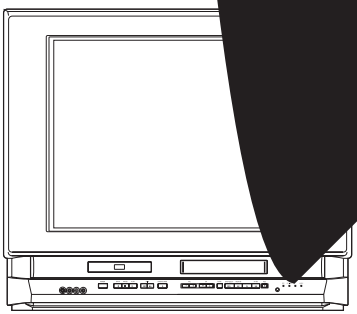
☐ It is necessary to enter TV mode by pressing $\frac{TV}{VCR}$ before selecting “CH” on the MAIN MENU.



For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

*Important: If a rel
remote

ne TV/VCR button on the



ns are prohibited except Timer
and tape eject. Useful for families with
nildren.

VCR LOCK ACTIVATED

VCR LOCK OFF

In Stop mode, **hold down REC** on the unit without a cassette inserted for 7 seconds to turn “ON.” (Please ignore “NO CASSETTE” warning.) Repeat above with or without cassette to turn “OFF.”

- VCR Lock is canceled automatically after about 24 hours if clock is set.

Feat

p Control Feature

Setup ⇨ **Blocking**

ch allows you
US MOVIES a

tered to view a
ng settings.

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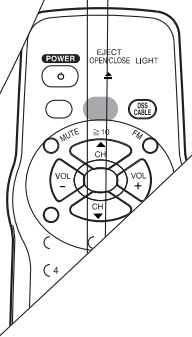

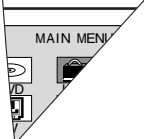

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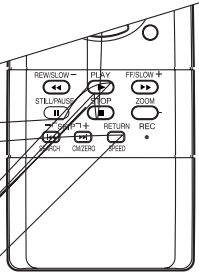

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Ratings m
ee pag 42).

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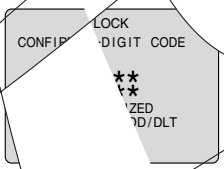


Chang **de**
• You will
Do steps to clear
current co
Repeat ste

- Some rental movies do not include V-Chip data.
- DO NOT forget your secret code.
- Once ratings are set, restricted tapes or programs cannot be accessed unless the secret code is entered.

*Important: If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

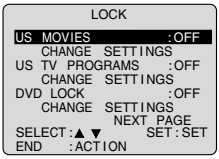
If LOCK menu is not displayed, perform "Enter Secret Code" steps on page 40.

Process of V-Chip Control Feature

Enter Code ⇨ **Setup** ⇨ **Blocking**

US MOVIES Ratings

1



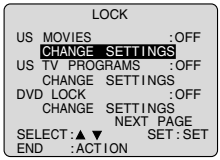
1) **Press ▲▼** to select US MOVIES.
2) **Press SET** to set "ON" or "OFF."

■ **"ON" → V-Chip Control is activated.**
■ **"OFF" → V-Chip Control is deactivated.**

Note

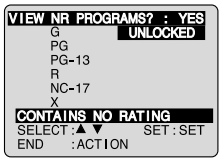
- "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian tapes or broadcasts.

2



1) **Press ▲▼** to select CHANGE SETTINGS.
2) **Press SET** to display screen.

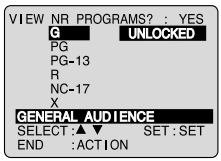
3



1) **Press ▲▼** to select VIEW NR PROGRAMS?.
2) **Press SET** to set "YES" or "NO."

NR (Not Rated) PROGRAMS
Some movies, such as old movies or foreign movies usually have no ratings.

4



Press ▲▼ to select and **SET** to set ratings to be blocked. (See ratings chart on this page.)

5 **Press ACTION** to redisplay LOCK menu and continue with US TV PROGRAMS Ratings Setup (page 42).
Or,
press ACTION three times to exit.

US MOVIES RATINGS

G	**GENERAL AUDIENCE:** All ages admitted.
PG	**PARENTAL GUIDANCE:** Some material may not be suitable for children.
PG-13	**PARENTS CAUTIONED:** Some material may be inappropriate for children under 13.
R	**RESTRICTED:** Children under 17 must be accompanied by a parent or adult.
NC-17	**OVER AGE 17 ONLY:** No one 17 and under admitted.
X	**ADULTS ONLY:**

V-Chip Control Feature (continued)

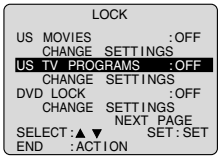
If LOCK menu is not displayed, do "Enter Secret Code" steps on page 40.

Process of V-Chip Control Feature

Enter Code ⇨ **Setup** ⇨ **Blocking**

US TV PROGRAMS Ratings

1



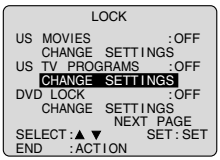
1) **Press ▲▼*** to select US TV PROGRAMS.
2) **Press SET** to set "ON" or "OFF."

■ **"ON" → V-Chip Control is activated.**
■ **"OFF" → V-Chip Control is deactivated.**

Note

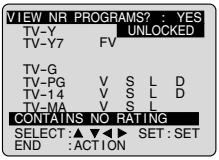
- "NEXT PAGE" displays CANADIAN V-Chip setting menu. Not necessary except when viewing Canadian tapes or broadcasts.

2



1) **Press ▲▼** to select CHANGE SETTINGS.
2) **Press SET** to display screen.

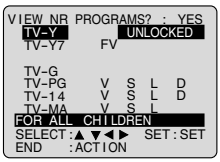
3



1) **Press ▲▼** to select VIEW NR PROGRAMS?.
2) **Press SET** to set "YES" or "NO."

NR (Not Rated) PROGRAMS
Some TV shows, such as news, sports, weather, bulletins, emergency information usually have no ratings.

4



Press ▲▼ to select and **SET** to set ratings to be blocked. (See ratings charts on this page.)

- Ratings highlighted in green will be blocked. Ratings in white letters will not be blocked.

Note

- You may select from standard TV ratings (chart 1), or customize to a specific content rating (chart 2).

5 **Press ACTION** three times to exit this mode.

US TV PROGRAMS RATINGS: Chart 1

TV-Y	**FOR ALL CHILDREN:** Content specifically geared to young viewers ages 2-6.
TV-Y7	**FOR AGE 7 AND OLDER:** May contain mild physical or comedic violence which may frighten children under 7.
TV-G	**GENERAL AUDIENCE:** Contains little or no violence, strong language, or sexual dialogue or situations.
TV-PG	**PARENTAL GUIDANCE:** May contain infrequent coarse language, limited violence, some suggestive sexual dialogue and situations.
TV-14	**PARENTS CAUTIONED:** May contain sophisticated themes, sexual situations, strong language, and more intense violence.
TV-MA	**MATURE AUDIENCE:** May contain mature themes, profane language, graphic violence, and sexual situations.

US TV PROGRAMS RATINGS: Chart 2

FV	**Fantasy Violence**
V	**Violence**
S	**Sexual Situations**
L	**Adult Language**
D	**Sexually Suggestive Dialogue**

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

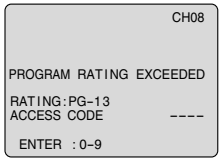
*Important: If a remote control button does not work when pressed, press the TV VCR button on the remote and try the button again.

Process of V-Chip Control Feature

Enter Code ⇨ Setup ⇨ Blocking

Blocking Message

<When V-Chip Control is activated>



- If a program or movie exceeds the ratings you have set, a message will appear on a black background and sound is muted.

To View a Blocked Program/Movie

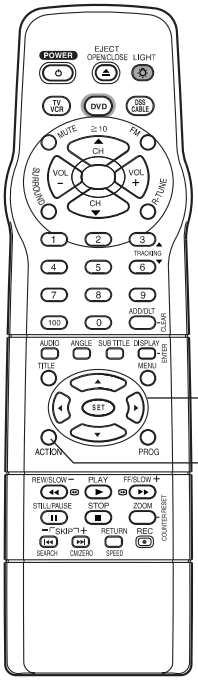
[Temporarily Deactivate V-Chip Control]

Enter your secret code (ACCESS CODE) in the Blocking Message screen.

- V-Chip Control is reactivated when power is turned off or power failure occurs.

[Deactivate V-Chip Control]

Enter your secret code (steps 1-3 page 40). Then, set US MOVIES and/or US TV PROGRAMS to "OFF" using ▲▼ and **SET**. (Ratings set on pages 41 and 42 is retained and will be in effect when V-Chip Control is activated again.)



SELECT
▲▼◄►
SET

ACTION

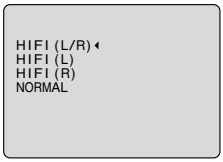
Audio Features

Audio Mode for Playback

Choose the type of sound track for playback.

1 See the "**Playback a Tape**" section on page 18 to playback the tape.

2



Press AUDIO* repeatedly (each press within 5 seconds) to select desired mode.

- Select "HIFI (L/R)," "HIFI (L)" or "HIFI (R)" to listen to stereo recordings in stereo sound. Select "NORMAL" for monaural sound.

- This screen appears when you **press AUDIO** during playback.

Audio Mode for Recording

Choose audio mode to match recording type.

1 **Press AUDIO** repeatedly to select the audio mode according to the type of broadcast to be recorded.

- The Audio mode selected stays in effect until it is changed.

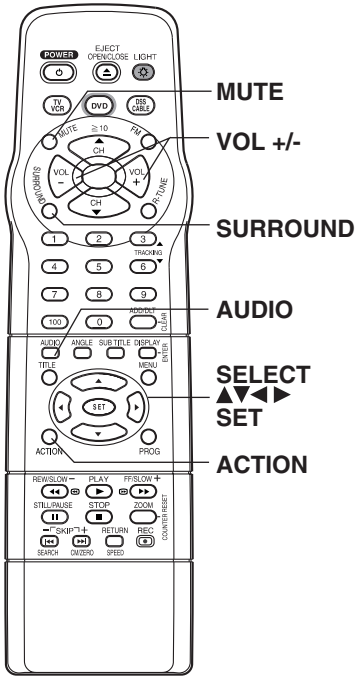
2 See the "**Record On a Tape**" section on page 18 to do a recording.

Notes

- Only tapes recorded in Hi-Fi stereo will playback with true stereo sound. Standard stereo tapes will playback with monaural sound.
- To listen to Hi-Fi stereo playback, the unit AUDIO (L/R) jacks must be connected to a stereo amp and speakers.
- There may be a difference in audio level between Hi-Fi and normal audio playback.

With the proper audio mode setting, your unit can:

- Record and playback MTS stereo broadcast (main language) in stereo Hi-Fi. Stereo sound is recorded on the left and right audio tracks and on the video portion of a tape.
- Record and playback a monaural broadcast (main language) or SAP (Secondary Audio Program, usually in a second language) on the Hi-Fi tracks for better quality monaural sound.
- Playback non-Hi-Fi tapes in monaural.



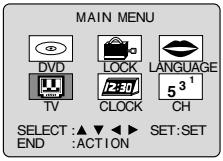
For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

DVD Volume Adjust

Some DVDs are recorded in lower average volume level. For these DVDs, this unit can be set so that the average volume is increased automatically.

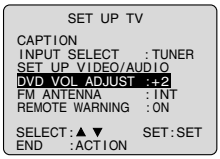
1 **Press ACTION** to display MAIN MENU.

2



1) **Press** ▲▼◄► to select "TV."
2) **Press SET** to display SET UP TV screen.

3

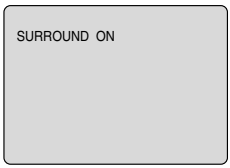


1) **Press** ▲▼ to select DVD VOL ADJUST.
2) **Press SET** to set the level (0, +1, or +2).

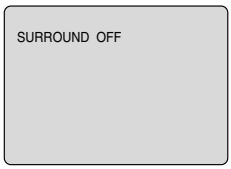
4 **Press ACTION** twice to return to the normal screen.

Surround Sound System

You can hear a deeper, 3-D sound effect using just the unit's two front speakers.



Press SURROUND.
- "SURROUND ON" is displayed.



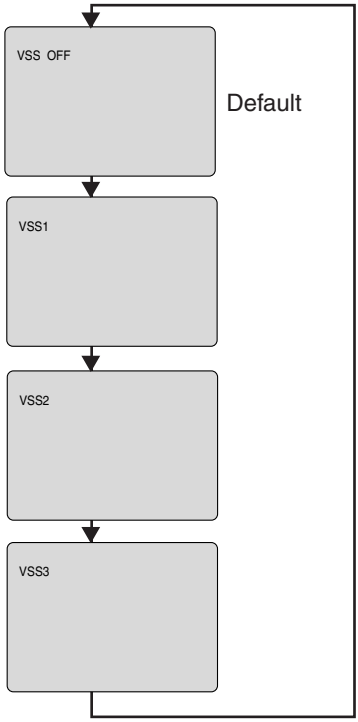
To Cancel, press SURROUND.

Notes
- Surround sound effect is not available for normal (mono) broadcasts.
- The surround effect (TV, VCR mode only) is not output to Audio Output L/R Connector.

V.S.S. (Virtual Surround Sound) [DVD only]

Enjoy a surround-like effect if you are using two front speakers only. The effect is broadened and sound seems to come from virtual speakers on either side if the disc has surround signals recorded on it.

Press SURROUND in DVD mode.
- The Surround sound effects can be changed by pressing SURROUND repeatedly as shown by the figure below.



Notes
- V.S.S. effects is available in DVD mode only.
- Turn off the surround effects on the other equipment.
- V.S.S. will not work, or will have less effect, with some discs.
- Turn V.S.S. off if it causes distortion.

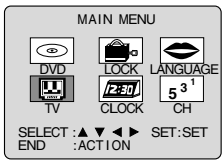
Video/Audio Menu

This feature allows easy setting of picture and sound suitable for each program source.

Video Menu

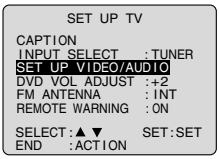
1 **Press ACTION*** to display MAIN MENU.

2



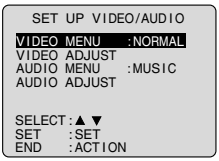
1) **Press ▲▼◀▶** to select "TV."
2) **Press SET** to display SET UP TV screen.

3



1) **Press ▲▼** to select "SET UP VIDEO/AUDIO."
2) **Press SET** to display.

4



1) **Press ▲▼** to select "VIDEO MENU."
2) **Press SET** repeatedly to select desired mode. (See below.)

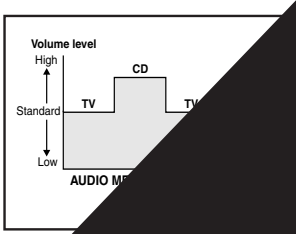
5 **Press ACTION** three times to end setup.

[Video Menu]

■ **NORMAL**
Factory setting.

■ **MOVIE**
Picture is adjusted for a movie-like feel.

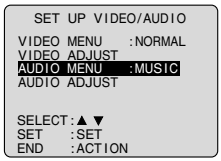
■ **NIGHT**
Color and picture intensity are adj
easier on the eyes for night vie



Audio Menu

a **Do steps 1 - 3 left.**

b



1) **Press ▲▼** to select "AUDIO MENU."
2) **Press SET** to select desired mode. (See below.)

c **Press ACTION** three times to end setup.

[Audio Menu]

■ **NORMAL**

■ **AUTO**
[Audio AGC (Auto Gain C
The sound level is automatical
the program source (see b

■ **MOVIE**
Sound suit

■
■
Sound s

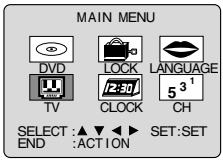
Video/Audio Adjustment

*__Important:__ If a remote control button does not work when pressed, press the TV/VCR button on the remote and try the button again.

Video Adjustment

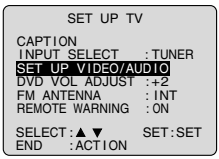
1 **Press ACTION** to display MAIN MENU.

2



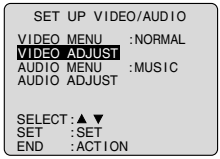
1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

3



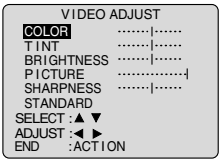
1) **Press ▲▼** to select "SET UP VIDEO/AUDIO."
2) **Press SET** to display.

4



1) **Press ▲▼** to select "VIDEO ADJUST."
2) **Press SET** to display.

5



1) **Press ▲▼** to select an item. (See below.)
2) **Press ◄►** to adjust.

To Reset VIDEO Controls,

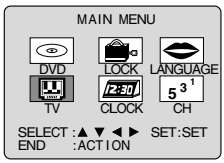
press ▲▼ and **SET** to select and set "STANDARD." All controls return to their factory settings.

6 **Press ACTION** four times to end setup.

Audio Adjustment

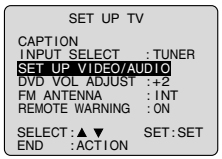
a **Press ACTION** to display MAIN MENU.

b



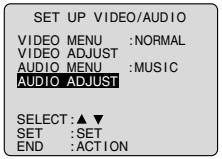
1) **Press ▲▼◄►** to select "TV."
2) **Press SET** to display SET UP TV screen.

c



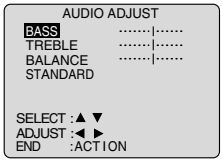
1) **Press ▲▼** to select "SET UP VIDEO/AUDIO."
2) **Press SET** to display.

d



1) **Press ▲▼** to select "AUDIO ADJUST."
2) **Press SET** to display.

e



1) **Press ▲▼** to select an item. (See below.)
2) **Press ◄►** to adjust.

To Reset AUDIO Controls,

press ▲▼ and **SET** to select and set "STANDARD." All controls return to their factory settings.

f **Press ACTION** four times to end setup.

[VIDEO Adjustment]

- **COLOR Control**
  Adjust color intensity.
- **TINT Control**
  Adjust for natural flesh tones.
- **BRIGHTNESS Control**
  Adjust picture brightness.
- **PICTURE Control**
  Adjust picture intensity by adjusting both contrast and color level in the proper balance.
- **SHARPNESS Control**
  Adjust picture sharpness.

[AUDIO Adjustment]

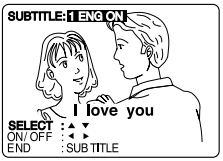
- **BASS Control**
  To adjust the intensity of low frequency sound.
- **TREBLE Control**
  To adjust the intensity of high frequency sound.
- **BALANCE Control**
  To adjust the (L/R) unit speaker output level.
  • The levels set here do not affect other audio equipment when connected to the Audio Output L/R Connector.

Disc Operation

Subtitle Language (DVD only)

You can select a different subtitle language (if offered) than the one set at the Settings for DVD Operation. (See page 60.)

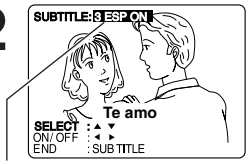
1



Press SUB TITLE* in Play mode to display the subtitle selection on-screen.

- Display disappears after 5 seconds.
- When no subtitles are offered, "-" will be displayed instead of the language number.

2



1) **Press ▲▼** to select desired language.
2) **Press ▶ (or ◀)** to select "ON" or "OFF."

Number of subtitle language being played back.

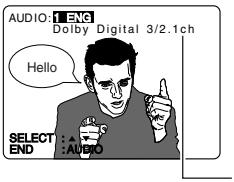
Notes

- When closed captioning is used along with subtitles, they may overlap. If so, turn one function off. (See pages 24 and 25.)
- If after several presses of the button the language does not change, language selection is not offered on the disc.
- Subtitles may not change to the selected language immediately.
- When disc is removed, subtitles revert to initial setting language. If the initial language is not recorded on the disc, the disc's priority language will appear.

Audio Soundtrack Language (DVD only)

You can change the audio soundtrack language, selected at the Settings for DVD Operation, to a different language if available. (See page 60.)
(This operation works only with discs on which multiple audio soundtrack languages are recorded.)

a



Press AUDIO in Play mode to display the audio selection on-screen.

- Display disappears after 5 seconds.

Audio attribute 1 type, sampling frequency, bit No. of the disc.

b

Press ▲▼ to select desired language.

Audio soundtrack language being played back.

☑ Check List

☐ Please read "Basic DVD Operation" on page 20.

[Subtitle language]
[Audio soundtrack language]

ENG	English
FRA	French
DEU	German
ITA	Italian
ESP	Spanish
NLD	Dutch
SVE	Swedish
NOR	Norwegian
DAN	Danish
POR	Portuguese
RUS	Russian
JPN	Japanese
CHI	Chinese
KOR	Korean
MAL	Malay
VIE	Vietnamese
THA	Thai
✻	Other

- Change the No. by **pressing ▲▼**, and **press SET**.

[Audio attribute 1 type, sampling frequency, bit No. of the disc (see page 61)**]**

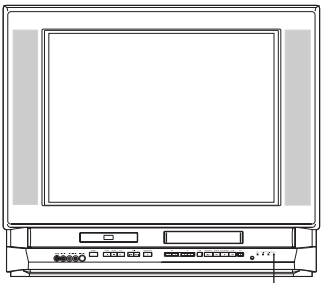
LPCM	96 kHz or 48 kHz	16 bit	Linear PCM disc
		20 bit	
		24 bit	
Dolby Digital	1 ch - 5.1 ch		Dolby Digital disc
dts	1 ch - 5.1 ch		dts disc

Notes

- If, after several presses of the AUDIO button the language does not change, language selection is not offered on the disc.
- When disc is removed, language reverts to initial setting. If this language is not recorded on the disc, the language recorded will be heard.

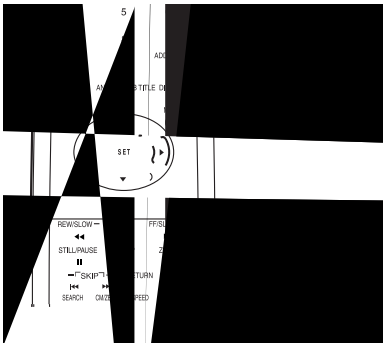
For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

When ⊘ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.



ANGLE Indicator

- ANGLE Indicator lights up on the unit when a scene recorded at different angles is detected.
- The angle number can be set beforehand so that the angle is switched whenever ANGLE Indicator lights up.

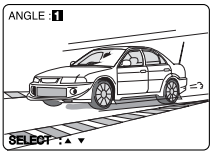


- Closed captioning will not be displayed while Picture Zoom is used. To see subtitles, set the subtitle feature to ON (see page 48).
- The subtitle cannot be enlarged nor can it's position be changed.
- The picture zoom feature does not work with a Video CD.
- During picture zoom, "ZOOM1" or "ZOOM2" appears on-screen for 5 second.
- Zooming, on some discs, may result in poor picture quality, or may not operate at all.

Multiple Angle Viewing (DVD only)

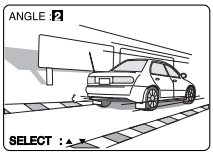
DVDs may contain scenes shot from multiple camera angles allowing the same scene to be viewed at different angles. You can view these angles, if available, using the ANGLE button.

1



Press ANGLE in Play mode to display the angle selection on-screen.
- Display disappears after 5 seconds.

2



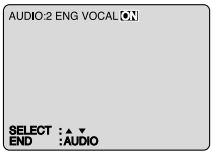
Press ▲▼ to select the desired angle.

Number of angle being played back.

Vocal selection for Karaoke discs (DVD/Video CD)

a **Press AUDIO** in Play mode to display the audio screen.

b



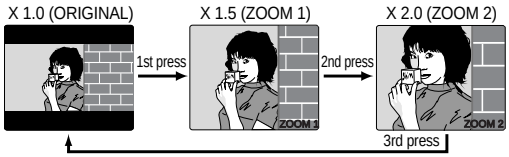
1) **Press ▲▼** (or ◀▶) to select as shown below.
2) **Press ▶** (or ◀) to set. (DVD only)

Picture Zoom (DVD only)

You can enlarge specific portions of a picture and select the zoom ratio using the ZOOM button on the remote during DVD playback.

Set Zoom size.

Press ZOOM repeatedly to change display as follows.
- You can enlarge the center portion of the image to one of 2 magnifications.



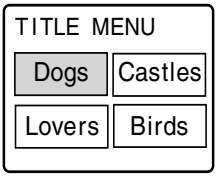
■ **Use the ▲, ▼, ◀ and ▶ buttons to move the position up, down, left and right.**

Disc Operation (continued)

Title menu (DVD only)

Some DVDs have more than one title, e.g. movies. If the disc offers a title menu, you can select the desired title number. (Operation may vary according to the disc.)

1



<Example>

Press TITLE* in Play mode to display title screen.

2

1) **Press ▲▼◀▶** or **NUMBER key(s)** to select a title.
2) **Press SET** or **PLAY** to start play.

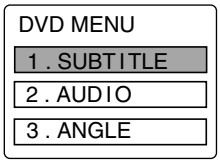
<Example>

• Step 2) not necessary when using NUMBER key(s).

DVD menu (DVD only)

DVDs may offer a special menu. This menu may include guides to unique contents, audio/subtitle languages, etc. Although contents and operation may vary, the following steps show basic steps for using the menu.

a



<Example>

Press MENU in Play mode to display DVD menu.

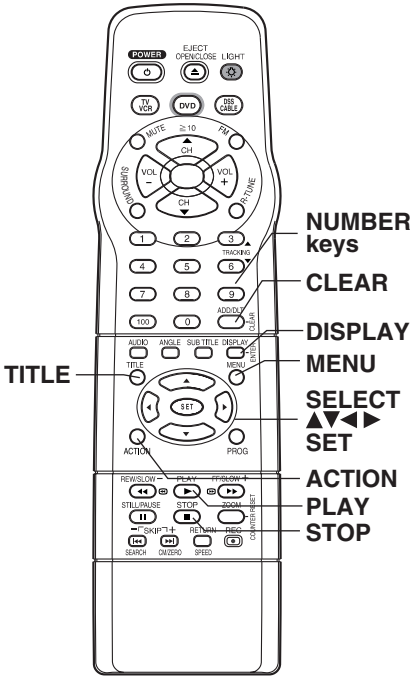
b

<Example>

1) **Press ▲▼◀▶** or **NUMBER key(s)** to select an item.
2) **Press SET** or **PLAY** to access.

• Step 2) not necessary when using NUMBER key(s).

Repeat step "b" if there is more than one menu.



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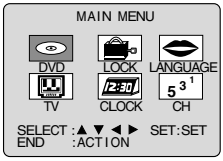
*Important: If a remote control button does not work when pressed, press the TV/VCR, DVD button on the remote and try the button again.

Program Play (Video CD/CD)

You can program specific tracks and order of play.

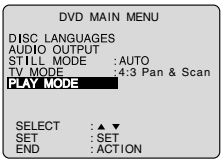
1 **Press ACTION** in Stop mode to display MAIN MENU.

2



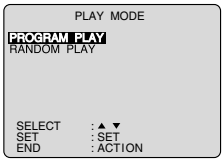
1) **Press ▲▼◄►** to select “DVD.”
2) **Press SET** to display screen.

3



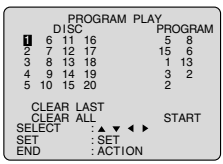
1) **Press ▲▼** to select “PLAY MODE.”
2) **Press SET** to display screen.

4



1) **Press ▲▼** to select “PROGRAM PLAY.”
2) **Press SET** to display screen.

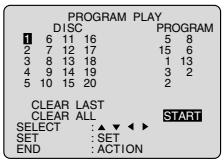
5



1) **Press ▲▼◄►** to select a track number. (Track numbers on disc are displayed.)
2) **Press SET** to set.

•Repeat step 5 to select another track.
•The selected track is added on the right side.

6



1) **Press ▲▼◄►** to select “START.”
2) **Press SET** to start play of programs in the sequence selected.

•To cancel, **press STOP** during play, then **press CLEAR**.

Notes

- Up to 15 tracks can be programmed.
- “◄” or “►” (depending on disc) indicates additional PROGRAM PLAY screen. **Press ▲▼◄►** for next or previous screen.
- **To clear the last program one by one, Press ▲▼◄►** to move to “CLEAR LAST” and **press SET**. (**Pressing CLEAR** also clears last program.)
- To clear all programs, **Press ▲▼◄►** to move to “CLEAR ALL” and **press SET**. (Programs are also cleared when the power is turned off or the disc is removed.)

Check List

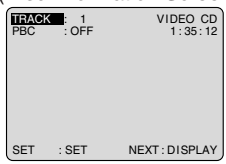
☐ Unit is in TV-VCR mode, press TV/VCR.
☐ Video CD or CD is inserted.

Program Repeat Play (Video CD/CD)

a **Do steps 1 through 6 on this page.**

b **Press DISPLAY** to display Disc Information screen.

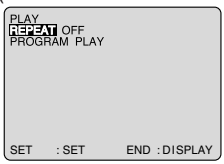
(Disc Information Screen)



c **Press DISPLAY** again to display Unit Information screen.

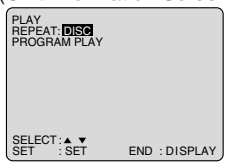
d **Press SET** to enter Select mode. Cursor move to “OFF.”

(Unit Information Screen)



e **Press ▲▼** to select “DISC.”

(Unit Information Screen)



f **Press SET** to set mode. Cursor move to “REPEAT.” To cancel, select “REPEAT: OFF” in step **e**, then **press SET**.

Advanced Operation

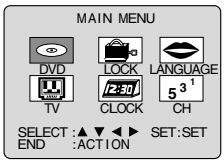
Disc Operation (continued)

Random Play (Video CD/CD)

Tracks are played in a random order.

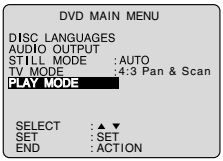
1 **Press ACTION*** in Stop mode to display MAIN MENU.

2



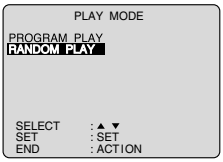
1) **Press ▲▼◀▶** to select “DVD.”
2) **Press SET** to display screen.

3



1) **Press ▲▼** to select “PLAY MODE.”
2) **Press SET** to display screen.

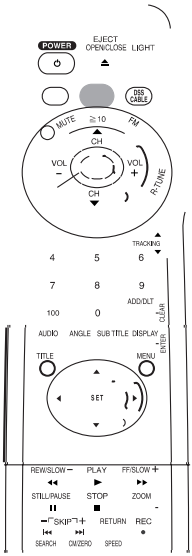
4



1) **Press ▲▼** to select “RANDOM PLAY.”
2) **Press SET** to begin random play.

• To cancel, **press STOP** during play, then **press CLEAR**.

*Important: If a remote control button does not work when pressed, press the TV/VCR, DVD button on the remote and try the button again.



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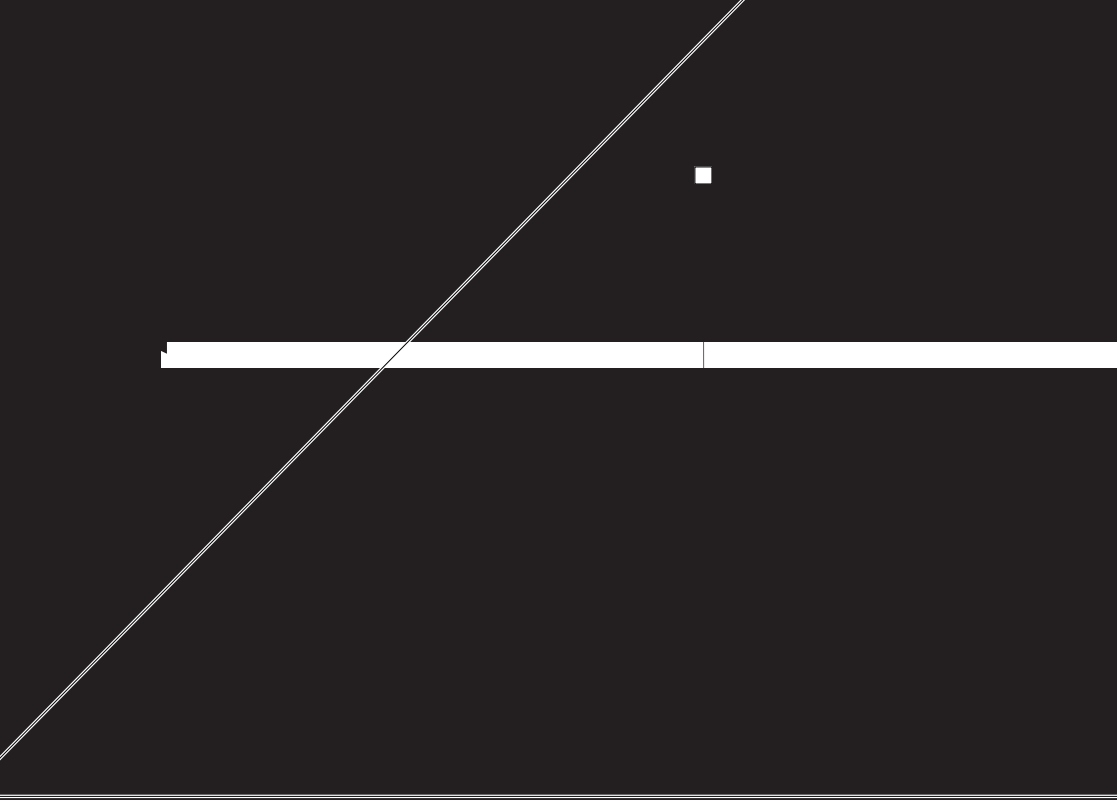
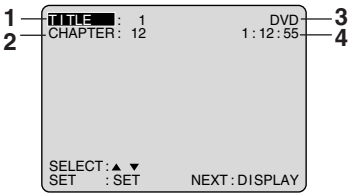


Detailed Descriptions of Each On-Screen Display

Disc information screen (for DVD)



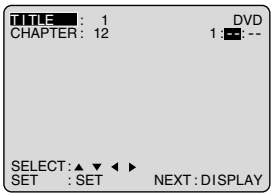
1. TITLE No.
- Select "TITLE," and **press SET***.
- Change the No. by **pressing ▲▼** or **NUMBER keys**, and **press SET**.

2. Chapter No.
- Select "CHAPTER," and **press SET**.
- Change the No. by **pressing ▲▼** or **NUMBER keys**, and **press SET**.

3. Disc currently being played

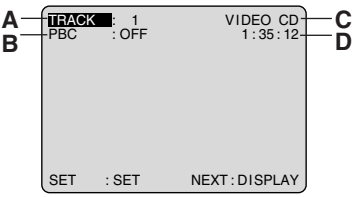
4. Elapsed playing time

The screen may be changed by selecting the elapsed time.
- Select the elapsed playing time ("xx:xx:xx"), and press SET.
- Change the elapsed time by pressing NUMBER keys.
  Hours → Minutes → Seconds are entered in order.
  If the time entered is not on the disc, the entry will have no effect.
  Re-enter the correct time.
  e.g., press 0 - 1 - 2 - 3 - 4 - 5 for 01 : 23 : 45.
  (Hour: 0 - 1 | Minutes: 2 - 3 | Seconds: 4 - 5)
- This function does not work with some discs.



If SET is pressed while making entries, unit returns to the condition before entries were made.

Disc information screen (for Video CD/ CD)



A. Track No.
- Select "TRACK," and **press SET**.
- Change the No. by **pressing ▲▼** or **NUMBER keys**, and **press SET**.

B. Playback control ON/OFF

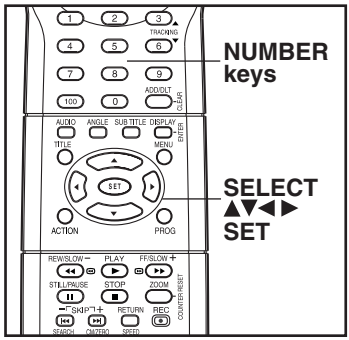
[Video CD with playback control only]

ON	Video CD menu play is displayed.
OFF	Video CD menu play is not displayed.

C. Disc currently being played

Video CD	CD

D. Elapsed playing time



Notes
- Track No. and elapsed playing time are not displayed during play started from menu of Video CDs with playback control.
- When ⊘ appears on the screen while a button is being pressed, it means that the corresponding operation is prohibited by the unit or the disc.

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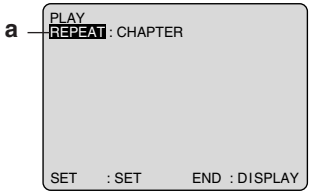
Detailed Descriptions of Each On-Screen Display

Unit information screen

- Select “REPEAT”, and **press SET**.
- Change the desired mode during play by **pressing ▲▼**, and **press SET**.

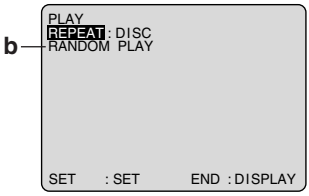
a. Repeat Play

DVD	CHAPTER REPEAT	TITLE REPEAT	REPEAT OFF
Video CD/CD	TRACK REPEAT	DISC REPEAT	REPEAT OFF



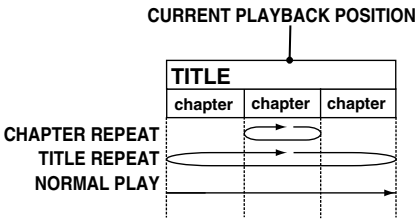
b. Play mode [Video CD/ CD only] (See page 51 or 52.)

PROGRAM PLAY	program play
RANDOM PLAY	random play
----	normal play

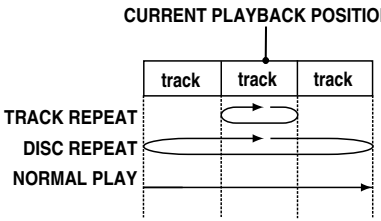


For your reference

• CHAPTER/TITLE REPEAT PLAY (DVD)



• TRACK/DISC REPEAT PLAY (Video CD/CD)



- For repeat play in VCR mode, see page 35.

MP3/WMA/JPEG Playback Operation

This unit can play MP3/WMA/JPEG format CD-R or CD-RW recorded for personal use on a PC, etc.
Some discs may not play due to recording condition.

1 **Press POWER*** on the remote or unit.

2 **Press OPEN/CLOSE,** and then place an MP3/WMA/JPEG disc into the disc tray. **Press OPEN/CLOSE** to close.

3
- MP3/WMA/JPEG menu is displayed.
- Playback starts automatically (except JPEG files).
- CD directory is displayed.

4 **Press ◀▶** to move cursor to File area or PLAY MODE. (In STOP mode)

■ **File area Operation**
(In STOP mode)

Press ▲▼ to select items and **SET or PLAY** to start.

Press SKIP+ ▶▶| (next) or **SKIP- |◀◀** (previous) to skip a file/folder page (7files) in the File area.

Select an MP3/WMA file (♫/♪).
MP3/WMA Playback (See next page)

Select an JPEG file (📷).
JPEG Playback (See next page)

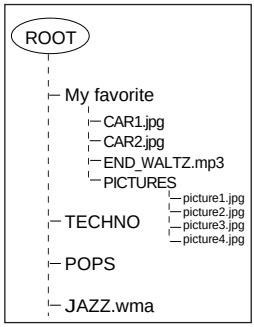
Select a folder (🗀).
Display files/folders contained in the folder.

Select a Parent folder (🗀).
Make changes to the previous directory display.

■ **Play mode Operation**
(In STOP mode)

Press ▲▼ to select the desired PLAY MODE.

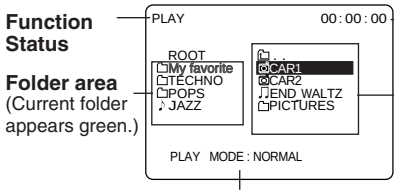
5 **Press ACTION** to return to the DVD MAIN MENU. (**Press ACTION** again to return to the MP3/WMA/JPEG MENU.)



Example: If the CD-R/CD-RW file hierarchy is displayed on the PC as shown in diagram at left, MP3/WMA/JPEG Menu Screen, like the one below is displayed.

Note
- File names are displayed in ascending order (1, 2, 3...9, A, B, C...Y, Z) in the MP3/WMA/JPEG MENU Screen ROOT.

MP3/WMA/JPEG MENU SCREEN



Explanation of Icons

♫:MP3 file ♪:WMA file 📷:JPEG file
🗀:Folder 🗀:Parent folder

PLAY MODE selection

PLAY MODE:	MP3/WMA Playback	JPEG Playback - Slide-show -
NORMAL	All MP3/WMA files are selected and played back one time only.	All JPEG files are selected and played back one time only.
SINGLE REPEAT	The selected MP3/WMA file is played back repeatedly.	The selected JPEG file is played back repeatedly.
FOLDER REPEAT	The MP3/WMA files contained in the selected folder are played back repeatedly. However, folders below the selected folder are not played back.	The JPEG files contained in the selected folder are played back repeatedly. However, folders below the selected folder are not played back.
DISC REPEAT	All MP3/WMA files are played back repeatedly.	All JPEG files are played back repeatedly.

MPEG Layer-3 audio decoding technology licensed from Fraunhofer IIS and Thomson multimedia.

Windows Media, and the Windows logo are trademarks, or registered trademarks of Microsoft Corporation in the United States and/or other countries. WMA is a compression format developed by Microsoft Corporation. It achieves the same sound quality as MP3 with a file size that is smaller than that of MP3.

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MP3/WMA Playback

1 **Do steps 1~3 on page 56.**
Press ▲▼ to select an MP3/WMA file (♫/♪) in STOP mode.

2 **Press SET** or **PLAY** to start playback.

■ **Forward/Reverse Search**
Press FF/SLOW+ or **REW/SLOW-** during play.
Press PLAY to release.
- Search speed, slow at first, increases with each additional press of the button up to 5 levels.

■ **Forward/Reverse Track Skip**
Press SKIP+ ▶▶| or **SKIP- |◀◀** during play.
Each press skips a track.
- If pressed within first 3 seconds of playback, skips to the previous track. If over 3 seconds, returns to top of track. (**SKIP- |◀◀** only.)
- Put unit in Stop mode before performing folder/file selection (see step 4 on previous page.)

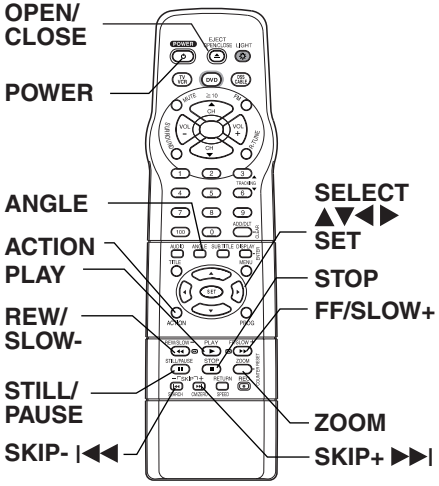
■ **Pause**
Press PAUSE during play.
Press PLAY to release.

3 **Press STOP** to stop play.

4 **Press OPEN/CLOSE** to eject the disc.
The MP3 MENU is closed automatically.

Note

- Copyright protected files and files containing errors cannot be played back. The unit skips to the next file.



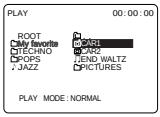
JPEG Playback

You can play JPEG images.
Displayable Image Size: 32x32~7680x7680 pixels

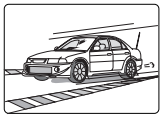
Note

- Some JPEG format may not be played back.

1 **Do steps 1~3 on page 56.**
Press ▲▼ to select an JPEG file (🖼).



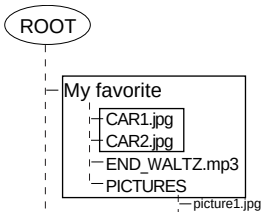
2 **Press SET** or **PLAY**. Selected file is displayed.



JPEG Playback Screen
<Example: CAR1>

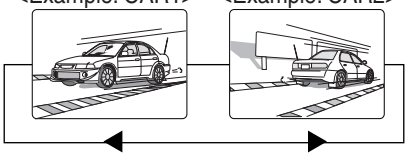
■ **Next/Previous Search**
Press SKIP+ ▶▶| or **SKIP- |◀◀**

<Example>



Only the JPEG files in a folder that were saved while being displayed are displayed.

<Example: CAR1> <Example: CAR2>



■ **Start Slide-show**
Press FF/SLOW+ or **REW/SLOW-.**
(see next page)

■ **Enlarging an image**
Press ZOOM. (see next page)

■ **Rotating an image**
Press ANGLE. (see next page)

■ **Returned on the MP3/WMA/JPEG MENU**
Press STOP. (see previous page)

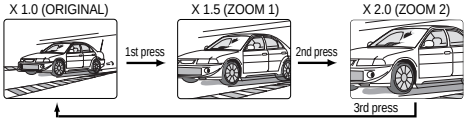
3 **Press ACTION** to return to the DVD MAIN MENU.

JPEG Playback - Zoom -

(During JPEG Playback.)
You can enlarge specific portions of a JPEG picture and select the zoom ratio using the ZOOM button on the remote during JPEG Playback.

Set Zoom size.
Press ZOOM repeatedly to change display as follows.
Press STOP to return to the MP3/WMA/JPEG MENU.

- You can enlarge the center portion of the image to one of 2 magnifications.
- Operation can be done during Rotation (below).



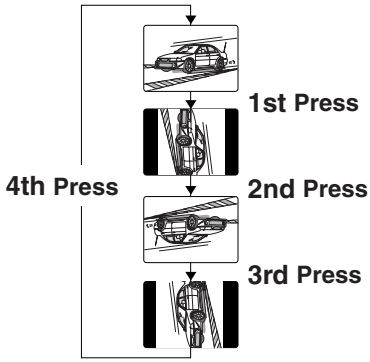
■ Use the ▲, ▼, ◄ and ► buttons to move the position up, down, left and right.

Note
- Position cannot be changed on X1.0 ORIGINAL images.

JPEG Playback - Rotation -

(During JPEG Playback.)
You can rotate a JPEG picture using the ANGLE button on the remote during JPEG Playback. (The JPEG picture will be rotated 90° clockwise.)

Set rotation.
Press ANGLE repeatedly to change display as below. (During JPEG Playback screen)
Press STOP to return to the MP3/WMA/JPEG MENU.



Notes
- Operation can be done during ZOOM (above).
- The vertical/horizontal ratio of rotated JPEG images may vary when they are displayed.

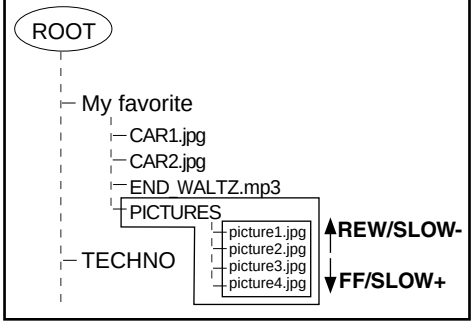
JPEG Playback - Slide-show -

(During JPEG Playback.)
JPEG files are displayed automatically (about every 3 seconds) as a slide-show.

1 **Press FF/SLOW+** or **REW/SLOW-**.

Only the JPEG files in a folder that were saved while being displayed are displayed.

<Example>



<Example>
If FF/SLOW is pressed while picture 1 is displayed.

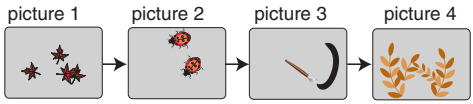


Image changes every 3 seconds.

If REW/SLOW- is pressed while picture 3 is displayed.

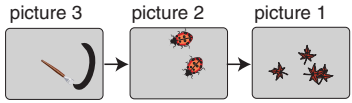
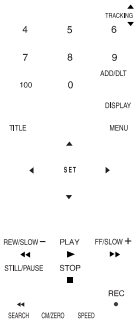


Image changes every 3 seconds.

■ **Still picture**
Press PAUSE (only SLIDE)
■ **Forward/Reverse Track Skip**
Press SKIP+ ▶▶| or **SKIP- |◀◀** . Each press skips a file.
■ **Cancel slide show**
Press STOP to return to the MP3/WMA/JPEG MENU.

2 **Press ACTION** to return to the DVD MAIN MENU.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com


TRACKING
4
5
6
7
8
9
ADD/DLT
100
0
DISPLAY
TITLE
MENU
SET
REW/SLOW −
PLAY
FF/SLOW +
STILL/PAUSE
STOP
REC
SEARCH
CM/ZERO
SPEED

1

Once initial settings are done, they remain in memory (even after the power is off) until changed. This means the unit will always operate under the same conditions (especially DVDs) each time.

3

DISC LANGUAGES (See below.)
Any languages offered on the disc can be set. If a language not offered is set, the original disc language will be selected.

AUDIO OUTPUT (See page 61.)
You can set the audio output that comes from the digital audio output terminal.

STILL MODE (See page 62.)

Tolected at utomaticly **See page 62.)**

DISC LANGUAGES (DVD only)

To select and set the language of the audio soundtrack, subtitles, or title/DVD menus for all discs to be played.

"AUDIO" selections
To select the audio soundtrack language.
(Factory preset: English)
English/Spanish/French/Japanese
Original: Original disc language
OTHER ✱✱✱✱: Other language selection*[1]

"SUBTITLE" selections
To select the subtitle language.
(Factory preset: AUTO)
AUTO: Same language selected for "AUDIO"
- If language set for "AUDIO" is used in playback, subtitles will not appear.
- If another language is used during playback, the subtitles will appear in the language selected at "AUDIO" setup.

English/Spanish/French/Japanese
OTHER ✱✱✱✱: Other language selection*[1]

"MENUS" selections
(Factory preset: English)
To select the language used in title menus or DVD menus.
English/Spanish/French/Japanese
OTHER ✱✱✱✱: Other language selection*[1]

To enter OTHER ✱✱✱✱ code number, Press NUMBER keys (Please refer to language codes on page 63).

To make corrections, press ◀ repeatedly to delete language code number, and correct.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

AUDIO OUTPUT

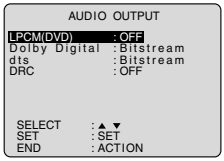
Select the digital output to be output from the optical digital audio output connector of the unit.

1 **Do steps 1 and 2 on page 60.**

2

1) **Press ▲▼** to select "AUDIO OUTPUT."
2) **Press SET** to display screen.

3



1) **Press ▲▼** to select an item.
2) **Press SET** repeatedly for output. (See below.)

■ "LPCM (DVD)" selections

OFF: Linear PCM of less than 48 kHz/16 bit is output. When playing DVDs recorded in linear PCM of over 48 kHz/20 bit, no digital audio is output. (Factory preset)

PCM: When playing DVDs recorded in linear PCM of 48 kHz/20 bit/24 bit or more, digital audio converted to 44.1 kHz/16 bit or 48 kHz/16 bit is output. (Digital output of PCM audio is restricted to48 kHz/16 bit or below for copyright protection.)

■ "Dolby Digital" selections

Bitstream: Dolby Digital bitstream (1ch-5.1ch) is output. (Factory preset)

PCM: When you have connected a amplifier that doesn't have a built-in Dolby Digital decoder.

■ "dts" selections

Bitstream: dts bitstream is output. (Factory preset)

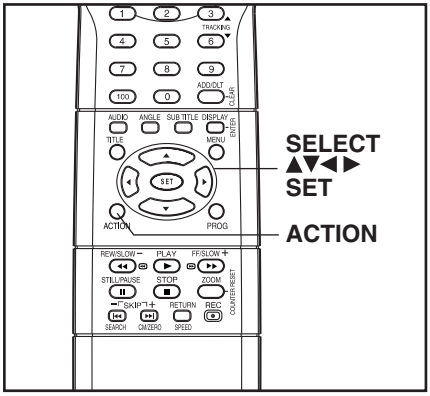
PCM: When you have connected a amplifier that doesn't have a built-in dts decoder.

■ "DRC (Dynamic Range Compression)" selections

OFF: Normal audio range is selected. (Factory preset)

ON: For dynamic sound even at low volume, this is useful for late-night listening. [Dolby Digital DVDs only].

4 **Press ACTION** to redisplay DVD MAIN MENU and go to step 2 to setup another item. Or, **press ACTION** three times to exit.



Type of amplifier to be connected	Recommended setting		
	LPCM (DVD)	Dolby Digital	dts
No amplifier is connected			
AV amplifier without Dolby Digital/dts decoder	PCM	PCM*1	PCM*1
AV amplifier including Dolby Digital decoder	PCM	Bitstream	PCM
AV amplifier including Dolby Digital/dts decoder	PCM	Bitstream	Bitstream*2

- Make settings according to amplifier connected to optical audio output as shown in above table.

*1 When connecting an amplifier (with an optical digital input connector) which does not contain the Dolby Digital or dts decoder, be sure to select "PCM." If "Bitstream" is selected, starting DVD play may cause such a high level of noise as to be harmful to your ears and damage the speakers.

*2 When a dts decoder is connected, please select "Bitstream" in "dts." If "PCM" is selected, there will be stereo sound.

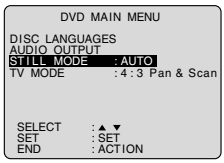
Settings for DVD Operation (continued)

STILL MODE

Set to reduce jitter in a displayed still picture or a motion picture.

1 **Do steps 1 and 2 on page 60.**

2



1) **Press ▲▼*** to select "STILL MODE."
2) **Press SET** repeatedly for mode. (See below)

AUTO: "FIELD" (Field still) or "FRAME" (Frame still) is automatically selected during the still mode. (Factory preset)

FIELD: "FIELD" (Field still) is always selected. This setting will reduce jitter when compared with "AUTO" on some discs.

FRAME: "FRAME" (Frame still) is always selected. Some texts and fine patterns will be seen clearly when compared with "AUTO" on some discs.

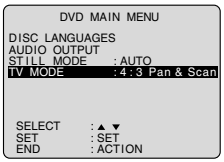
3 **Press ACTION** twice to exit this mode.

Selecting TV MODE

Set the screen display style for widescreen video material playback.

a **Do steps 1 and 2 on page 60.**

b



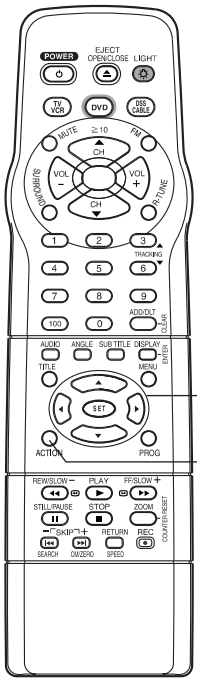
1) **Press ▲▼** to select "TV MODE."
2) **Press SET** repeatedly for mode. (See below.)

4:3 Pan & Scan : (Factory preset) Widescreen video data is played in Pan & Scan style (left and right of screen is trimmed.)
- Video data not formatted in Pan & Scan will play in letterbox style.

4:3 Letterbox : Widescreen video data is played in Letterbox style (top and bottom of screen has black margin).

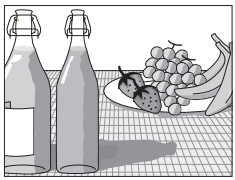
c **Press ACTION** twice to exit this mode.

*Important:
If a remote control button does not work when pressed, press the DVD button on the remote and try the button again.

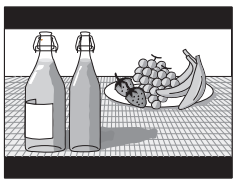


Example

4:3 Pan & Scan (Factory preset)



4:3 Letterbox



For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

Language Code List

Enter the appropriate code number for the initial settings “AUDIO,” “SUBTITLE” and/or “MENUS” (see page 60).

Code	Language
6565	Afar
6566	Abkhazian
6570	Afrikaans
6577	Ameharic
6582	Arabic
6583	Assamese
6588	Aymara
6590	Azerbaijani
6665	Bashkir
6669	Byelorussian
6671	Bulgarian
6672	Bihari
6678	Bengali;Bangla
6679	Tibetan
6682	Breton
6765	Catalan
6779	Corsican
6783	Czech
6789	Welsh
6865	Danish
6869	German
6890	Bhutani
6976	Greek
6978	English
6979	Esperanto
6983	Spanish
6984	Estonian
6985	Basque
7065	Persian
7073	Finnish
7074	Fiji

Code	Language
7079	Faroese
7082	French
7089	Frisian
7165	Irish
7168	Scots Gaelic
7176	Galician
7178	Guarani
7185	Gujarati
7265	Hausa
7273	Hindi
7282	Croatian
7285	Hungarian
7289	Armenian
7365	Interlingua
7378	Indonesian
7383	Icelandic
7384	Italian
7387	Hebrew
7465	Japanese
7473	Yiddish
7487	Javanese
7565	Georgian
7575	Kazakh
7576	Greenlandic
7577	Cambodian
7578	Kannada
7579	Korean
7583	Kashmiri
7585	Kurdish
7589	Kirghiz
7665	Latin

Code	Language
7678	Lingala
7679	Laothian
7684	Lithuanian
7686	Latvian, Lettish
7771	Malagasy
7773	Maori
7775	Macedonian
7776	Malayalam
7778	Mongolian
7779	Moldavian
7782	Marathi
7783	Malay
7784	Maltese
7789	Burmese
7865	Nauru
7869	Nepali
7876	Dutch
7879	Norwegian
7982	Oriya
8065	Panjabi
8076	Polish
8083	Pashto, Pushto
8084	Portuguese
8185	Quechua
8277	Rhaeto-Romance
8279	Romanian
8285	Russian
8365	Sanskrit
8368	Sindhi
8372	Serbo-Croatian
8373	Singhalese

Code	Language
8375	Slovak
8376	Slovenian
8377	Samoan
8378	Shona
8379	Somali
8381	Albanian
8382	Serbian
8385	Sundanese
8386	Swedish
8387	Swahili
8465	Tamil
8469	Telugu
8471	Tajik
8472	Thai
8473	Tigrinya
8475	Turkmen
8476	Tagalog
8479	Tonga
8482	Turkish
8484	Tatar
8487	Twi
8575	Ukrainian
8582	Urdu
8590	Uzbek
8673	Vietnamese
8679	Volapük
8779	Wolof
8872	Xhosa
8979	Yoruba
9072	Chinese
9085	Zulu

Before Requesting Service

Check the following points once again if you are having trouble with your unit.

Power	Correction
No power…	• Completely insert Power Plug into an AC outlet. • Set POWER button to ON.
Power turns itself off...	• Auto power-off (shut off) occurs after about 5 min. in DVD mode with no operation, or if there is no broadcast signal in TV or Playback mode. Turn the power back on.(P. 21, 37)
Monitor	**Correction**
No picture or sound...	• Make sure your antenna system (TV or CABLE), is correctly set. (P. 11) • Completely insert Power Plug into an AC outlet. • Set POWER button to ON.
Poor picture with normal sound...	• Adjust BRIGHTNESS, SHARPNESS, and PICTURE controls in the SET UP Video Adjustment. (P. 47)
Poor sound with normal picture...	• Adjust VOLUME control. (P. 22)
Poor TV reception...	• Adjust SHARPNESS and PICTURE controls in the SET UP Video Adjustment. (P. 47)
No color or poor color...	• Adjust TINT and COLOR controls in the SET UP Video Adjustment. (P. 47)
Ghost (multiple) images...	• Install a directional antenna.
TV programs cannot be watched...	• Make sure the selected channel is in unit's memory. (P. 16)
Channel cannot be selected...	• Only the channel being recorded can be viewed on this unit.
VCR	**Correction**
TV program cannot be recorded...	• Make sure your antenna system (TV or CABLE), is correctly set. (P. 11) • Make sure cassette record tab is intact. (P. 4)
Timer recording cannot be performed…	• Check that clock is set to current time and date. • Make sure DSS/CABLE box (if used) is left on and tuned to channel to be recorded. • Set recording Start/Stop times correctly. (P. 30-31) • Timer recording may not be performed or continued if a power interruption of more than 1 minute occurs before or during a Timer Recording, even after power is restored.
No playback picture, or the playback picture is noisy or contains streaks...	• Adjust TRACKING control in either direction. (P. 6) • Try Head Cleaning. (P. 6)
VCR cannot be controlled...	• Make sure VCR LOCK is set to off. (P. 39)
Remote Control	**Correction**
Unit cannot be controlled...	• Aim Remote directly at the remote sensor on the unit. (P. 9) • Avoid any object blocking signal path. • Inspect the remote batteries. (P. 4) • Make sure VCR LOCK is set to off. (P. 39) • Exposing unit remote sensor to direct fluorescent or outdoor light may cause signal interference.
ACTION, PLAY, SELECT, SET POWER, etc. buttons cannot be selected...	• Press $\frac{TV}{VCR}$ for TV-VCR mode. (P. 32) • Press DVD for DVD mode. (P. 32) • Press FM for FM mode. (P. 32) • Check remote batteries.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

DVD/Video CD/CD	Correction
Play fails to start even when PLAY is pressed...	• This unit cannot play discs other than DVDs, Video CDs and CDs. • The disc may be dirty and require cleaning.
Play starts but then stops immediately...	• Be sure disc is installed with label side up.
Picture is distorted during rapid advance or rapid reverse...	• The picture will be somewhat distorted at times: this is normal.
No Forward/Reverse search play...	• Some discs may have sections which prohibit Forward/Reverse search. (P. 21)
Play does not start even when title is selected...	• Confirm the “DVD LOCK” setting. (P. 59)
Audio soundtrack and/or subtitle language is not the one selected at the initial settings...	• If the audio soundtrack and/or subtitle language selected at DVD initial settings does not exist on the disc, it will not be accessible.
No subtitles...	• Subtitles appear only when available on disc. • Select “ON” at the “Subtitle language” section (P. 48) to display subtitles.
Alternative audio soundtrack (or subtitle) language cannot be selected...	• Alternative language cannot be selected with discs which do not contain more than one language. • For some discs, alternative language cannot be selected with the AUDIO or SUB TITLE button. Try selecting it from the DVD MAIN MENU if available.
Angle cannot be changed...	• This function is dependent on software availability. Even if disc has multiple angles, they may be recorded for specific scenes only (ANGLE Indicator on unit lights up). (P. 49)
Miscellaneous	**Correction**
Video cassette cannot be inserted...	• Insert the cassette window side up; record tab facing you.
Video cassette cannot be removed...	• Completely insert Power Plug into an AC outlet.
Eject does not function or insertion cannot be done...	• Turn the POWER off and then on, and try ejecting or inserting the tape again.
Video cassette ejects when a recording is started, or the power is turned off for timer recording...	• Make sure cassette record tab is intact. (P. 4)
The disc cannot be removed...	• First, unplug unit. Then, prepare a rigid wire (e.g. an extended paper clip, etc.) and, applying moderate force, insert it straight into the hole at the base of the tray. The tray will eject a little. Now, pull the tray all the way out and remove the disc. (P. 10)
In Stop mode, the VCR motor (CYLINDER) continues to rotate..	• To enable Quick Play mechanism, the VCR cylinder will rotate for about 3 minutes. This reduces response time from Stop to Play mode and from Play to Rewind Search mode.

If you cannot resolve the problem, please call the Customer Satisfaction Center for product assistance at 1-800-211-PANA(7262).
To locate an authorized servicenter call toll free 1-800-211-PANA(7262)
or send e-mail to : consumerproducts@panasonic.com.

Warning and Instruction Displays

These displays will alert you of a missed operation or provide further instructions.

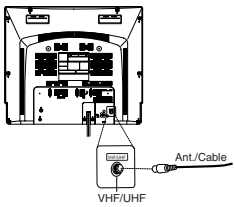
OSD	Caution
PLEASE SET CLOCK BEFORE PROGRAMMING	If you attempt to set or review a Timer Recording or set the On-Timer and the Clock is not set... (P.16-17)
CHECK CASSETTE RECORD TAB	If you press REC, and a cassette is inserted with no record tab... (P.4, 18)
TO CANCEL TIMER REC HOLD DOWN STOP KEY FOR APPROX 3 SEC	If you press STOP during a Timer Recording... (P.31)
NO CASSETTE PLEASE INSERT A CASSETTE	If you press PLAY, FF, REW, or REC without a cassette inserted... (P.18)
PLEASE PREPARE FOR TIMER REC	If the unit is not in Stop mode or a cassette with record tab is not inserted two minutes before a Timer Recording is about to begin... (P.30-31)
VIDEO HEADS MAY NEED CLEANING PLEASE INSERT HEAD CLEANING CASSETTE OR REFER TO MANUAL END: PLAY	If head cleaning becomes necessary while playing back a tape... (P.6)
VCR LOCK ACTIVATED	If you press a function button other than STOP/EJECT or POWER while the unit is in VCR Lock mode... (P.39)
PLEASE CHECK THE DISC, AND FOR STAINS OR SCRATCHES ON DISC	If you press PLAY, or the unit reads data from a stained or scratched disc in DVD mode. Also, if the type of disc is other than DVD, Video CD or CD... (P.7)
THIS DISC MAY NOT BE PLAYED IN YOUR REGION	Playback of a disc with different region number was attempted. Only discs marked region “1,” “ALL,” or those that include “1” are playable on this unit. (P.3)
THIS TYPE OF DISC CANNOT BE PLAYED. PLEASE INSERT A DIFFERENT DISC	An unusable disc is inserted in the unit. (P.7)
CANNOT PLAY THIS FILE	This file format cannot be played. (Appears during MP3/WMA/JPEG file playback)(P.56)
THIS FILE IS PROTECTED	This file is copyright protected and cannot be played back. (Playback is prohibited.)(P.56)
IT IS PROHIBITED TO COPY DVD/ VIDEO CD/CD TO VHS	If you press REC in DVD mode... (P.18-19)

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

Spanish Quick Use Guide/Guía para rápida consulta

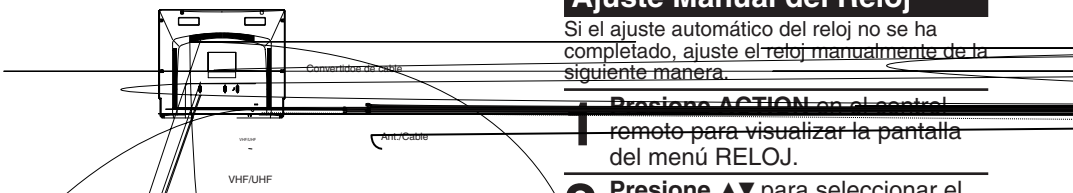
■ Conexión para Ant./Cable

Conecte Ant./Cable a la entrada de antena de la TV (VHF/UHF).



■ Conexión para Sistema Digital de Satelite (DSS)/Convertidor de cable

Conecte la salida del convertidor de cable la entrada "VFH/UHF" con el RF cable.



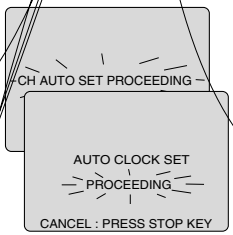
Conecte por favor todas las conexiones del cable o de la antena antes de energizar los aparatos.

Realizando Configuración Inicial

Presione TV/VCR para la modalidad TV-VCR.

1 **Conecte el cable electrico de la unidad en el enchufe de pared de la CA.**

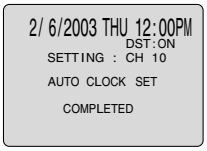
2



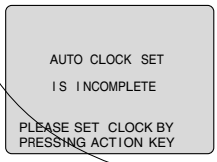
Encienda la TV mediante el control o directamente en la unidad. La unidad inicia la busqueda de canales y ajusta el tiempo automaticamente.

- Si usa convertidor de cable, enciendala y seleccione el Servicio Publico de Canales de Television (PBS) en su horario de uso o tiempo de su zona. Si utiliza receptor DSS este debe de estar apagado.

3



Selecciones se realizaran automaticamente, cuando la configuracion termine la pantalla siguiente aparecera.



- Si "AUTO CLOCK SET IS INCOMPLETE" aparece en pantalla, coloque el tiempo usando el procedimiento manual (MANUAL CLOCK SET), vealo enseguida.

Continúa...

Nota

- Los botones de funciones son inoperantes durante la Configuración inicial.
- Para retirar un cassette durante el Ajuste automático, pulse EJECT dos veces en el control remoto o STOP dos veces en el VCR. En este caso, los ajustes se deben realizar manualmente. (Vea la p.16-17 de Libro de operaciones avanzadas).
- Dependiendo de las condiciones, puede que el Ajuste automático del reloj tarde más de 30 minutos. En ese caso, pulse STOP para detener la configuración y realice los ajustes manualmente. (Vea la p.16-17 de Libro de operaciones avanzadas).

Ajuste Manual del Reloj

Si el ajuste automático del reloj no se ha completado, ajuste el reloj manualmente de la siguiente manera.

1 **Presione ACTION** en el control remoto para visualizar la pantalla del menú RELOJ.

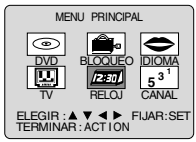
2 **Presione ▲▼** para seleccionar el mes y **SET** para colocarlo. De la misma forma, seleccione y ajuste la fecha, año, hora y DST (Hora de Verano).

3 **Presione dos veces la tecla ACTION** para poner el RELOJ en marcha y salir.

Ajustar de nuevo el reloj

1 **Presione ACTION** para visualizar el menú.

2



Presione ▲▼◄► para seleccionar "RELOJ," y luego Presione SET.

3

Presione ▲▼ para seleccionar "MANUAL" y luego presione SET.

4

Presione ▲▼ y SET para seleccionar y ajustar la hora y la fecha.

5 **Presione ACTION dos veces** para que el reloj comience a funcionar y salir de este modo.

Spanish Quick Use Guide/Guía para rápida consulta

Operaciones básicas para la reproducción (VCR)

1 **Inserte un cassette.**
- El videograbador combinado se enciende automáticamente.

2 **Presione PLAY.**
- La reproducción comienza automáticamente si el cassette no tiene la lengüeta para prevención de grabación.

■ Para encontrar una escena en particular
Búsqueda hacia adelante **→ Presione FF/SLOW+**
Búsqueda hacia atrás **→ Presione REW/SLOW-**
■ Para ver una imagen fija (congelada) **→ Presione STILL/PAUSE**
■ Para ver en cámara lenta **→ Presione FF/SLOW+** o **REW/SLOW-** en el modo de imagen fija
■ Para ver imágenes cuadro a cuadro **→ Presione STILL/PAUSE** en el modo de imagen fija
■ Para parar **→ Presione STOP**
■ Para rebobinar la cinta **→ Presione REW/SLOW-**
■ Para hacer avanzar la cinta rápidamente **→ Presione FF/SLOW+**
■ Para expulsar el cassette **→ Presione EJECT** en el control remoto o **STOP/EJECT** en el videograbador combinado

Operaciones básicas para la grabación

1 **Inserte un cassette con la lengüeta para prevención de grabado.**
- El videograbador combinado se enciende automáticamente.

2 **Presione CH ▲▼** o **las teclas numéricas** para seleccionar el canal.

3 **Presione SPEED** para seleccionar la velocidad de grabación.
SP = reproducción normal
LP = reproducción larga
SLP = reproducción super larga
- La velocidad seleccionada debe aparecer en la pantalla.

4 **Presione REC** para comenzar la grabación.
- Para no editar ó grabar partes de una grabación, presione STILL/PAUSE para hacer una pausa durante la grabación.
- No podrá ver otro canal durante la grabación.

■ Para parar **→ Presione STOP**.
■ **Si se desea que el videograbador deje de grabar a una hora prefijada.** (Grabación de un toque)
Presione REC repetidamente para ajustar la hora de grabación (30 min - 4 horas.)

Grabación con temporizador

1 **Presione PROG** para visualizar "FIJAR PROGRAMACION."

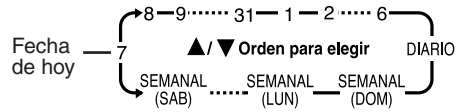
2

1) **Presione ▲▼** para seleccionar "TEMPORIZADOR."
2) **Presione SET** para visualizar.

- Si ya existe un programa en la memoria, **presione ▲▼** y **SET** para seleccionar un número de programa sin usar.

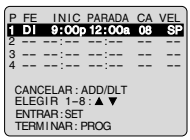
3

Presione ▲▼ para seleccionar y **presione SET** o **◄►** para colocar.
- 1-31 = Grabación única
- DIARIO = a la misma hora de lunes a viernes
- SEMANAL = a la misma hora una vez a la semana



Repita el paso 3 para ajustar:
hora de comienzo, hora de parada, canal (o LINEA para una fuente exterior), velocidad (SP, LP, SLP)

4



Presione PROG para terminar el programa. **Para introducir más programas**, **presione ▲▼** y **SET** para seleccionar el n úmero de programa en blanco, y luego repita los pasos 3.

5 **Presione PROG dos veces** para salir de este modo.
- Si está usando un decodificador de TV cable, asegúrese que se encuentra en el canal deseado y que la alimentación queda conectada para grabar con temporizador.
- El indicador PROG TIMER se enciende en el videograbador combinado.

For assistance, please call : 1-800-211-PANA(7262) or send e-mail to : consumerproducts@panasonic.com

• Cuando ... títulos grabados, "- ..." se visualizará en lugar del número de idioma.

2

2

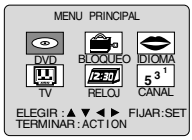
Presione ▲▼ para seleccion el idioma deseado.

Reproducción programada [Vídeo CD/CD]

Puede usted programar pistas específicas y el orden de reproducción.

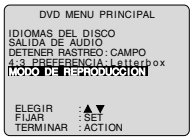
1 **Presione ACTION** en el modo paro (STOP) para visualizar MAIN MENU.

2



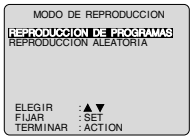
1) **Presione ▲▼◄►** para seleccionar "DVD."
2) **Presione SET** para visualizar.

3



1) **Presione ▲▼** para seleccionar "MODO DE REPRODUCCION."
2) **Presione SET** para visualizar.

4



1) **Presione ▲▼** para seleccionar "REPRODUCCION DE PROGRAMAS."
2) **Presione SET** para visualizar.

5

1) **Presione ▲▼◄►** para seleccionar el número de la pista deseada. (Se visualizan los números de la pista del disco).
2) **Presione SET** para seleccionar.

- Repita el paso 5 para seleccionar otra pista.
- La pista seleccionada se añade a la parte derecha.

6

1) **Presione ▲▼◄►** para seleccionar "INICIAR."
2) **Presione SET**.

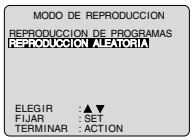
- La reproducción comienza en la secuencia programada.
- Para cancelar, presione STOP durante la reproducción y luego presione CLEAR.

Reproducción arbitraria [Vídeo CD/CD]

Las pistas se reproducen de forma arbitraria.

1 **Repita los pasos 1-3 de la "Reproduccion programa".**

2



1) **Presione ▲▼** para seleccionar "REPRODUCCION ALEATORIA."
2) **Presione SET**.

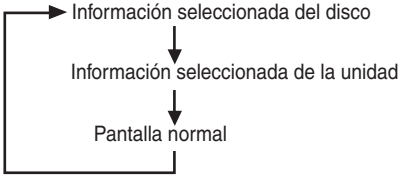
- Comienza la reproducción arbitraria.
- Para cancelar, **presione STOP** durante la reproducción y luego **presione CLEAR**.

Funcionamiento del DVD utilizando visualizaciones en pantalla

Cuando se presiona DISPLAY, la visualización en pantalla muestra la información del disco (título / capítulo / número de lista, tiempo transcurrido de reproducción, audio / idioma del subtítulo, y ángulo) e información (repetir la reproducción, modo reproducción, Karaoke vocal encendido / apagado, etc.).

1 **Presione DISPLAY** en el modo reproducción o parada para visualizar en pantalla.

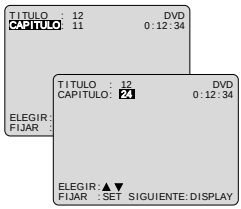
- Cada vez que se **presione DISPLAY**, la visualización en pantalla cambia como se muestra a continuación.



2 1) **Presione ▲▼** (o ◄►) para seleccionar el articulo deseado.
2) **Presione SET** para colocar.

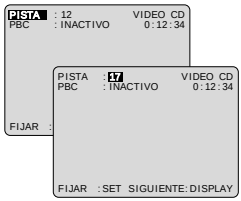
3

<Ejemplo de DVD>



1) **Presione ▲▼** para seleccionar el ajuste deseado.
2) **Presione SET** para colocar.

<Ejemplo de Vídeo CD>



Para volver a la pantalla normal,

presione repetidamente CLEAR o DISPLAY.

Fijaciones iniciales

1 **Presione ACTION** en el modo de paro (STOP) para visualizar MAIN MENU.

2 1) **Presione ▲▼◄►** para seleccionar "DVD."
2) **Presione SET** para visualizar.

3 1) Presione st para seleccionar el artículo deseado.
2) Presione SET.

IDIOMAS DEL DISCO
Todos los idiomas ofrecidos en el disco pueden ser ajustados, Si el idioma ajustado no es ofrecido en el disco, se seleccionará el idioma original del disco.

SALIDA DE AUDIO
Puede usted ajustar la salida audio procedente de la terminal de salida audio digital.

DETENER RASTREO
Para seleccionar "CAMPO" o "CUADRO" para prevenir inestabilidad o para permitir ver textos pequeños o patrones finos claramente en el modo de imagen fija.

4 : 3 PREFERENCIA
Para seleccionar si el material del vídeo para pantalla ancha será vuelto a reproducir en el estilo Pan&Scan o en el estilo Letterbox en la pantalla.

4 1) Presione st para seleccionar el artículo deseado.
2) Presione SET.

5 Volver a visualizar el menú de DVD para continuar el ajuste.
Presione ACTION y pase al paso 3 para ajustar otro articulo o, para salir, **presione ACTION** tres veces.

Selección de IDIOMAS DEL DISCO [DVD solamente]

Seleccione "AUDIO"
Inglés/Español/Francés/Japones: (Fijación de fábrica : inglés)
Original : Se seleccionará el idioma original de cada disco.
OTRO ** :** Se puede seleccionar el otro idioma.

Seleccione "SUBTITULO"
AUTO : Se seleccionará el mismo que fue seleccionado en la preparación de "AUDIO". (Fijación de fábrica)
- Si el idioma seleccionado en la preparación de "AUDIO" se utiliza durante la reproducción, los subtítulos no aparecerán.
- Si se utiliza otro idioma durante la reproducción, los subtítulos aparecerán en el idioma seleccionado en la preparación de "AUDIO"

Inglés/Español/Francés/Japones
OTRO ** :** Se puede seleccionar el otro idioma.

Seleccione "MENU"
Inglés/Español/Francés/Japones : (Fijación de fábrica : inglés)
OTRO ** :** Se puede seleccionar el otro idioma.

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Selección de 4 : 3 PREFERENCIA

4:3 Pan&Scan : Datos de la pantalla ancha de vídeo son reproducidos en el estilo Pan & Scan (la parte derecha e izquierda de la pantalla son recortadas). (Fijación de fábrica)

- Datos de vídeo no formateados en Pan & Scan serán reproducidos en el estilo letterbox.

4:3 Letterbox : Datos de la pantalla ancha de vídeo son reproducidos en el estilo Letterbox (la parte de arriba y abajo de la pantalla tienen un margen negro).

Selección de DETENER RASTREO

AUTO : Durante el modo de imagen fija se seleccionarán automáticamente "Campo fijo" o "Cuadro fijo" (Fijacion de fabrica)

CAMPO : Seleccione este ajuste cuando ocurra "distorsión" en las imagenes, incluso cuando se haya seleccionado "AUTO".

CUADRO : "Cuadro fijo" esta siempre seleccionado. Se utiliza cuando no se puedan ver claramente textos pequeño o patrones finos incluso cuando esté seleccionado "AUTO".

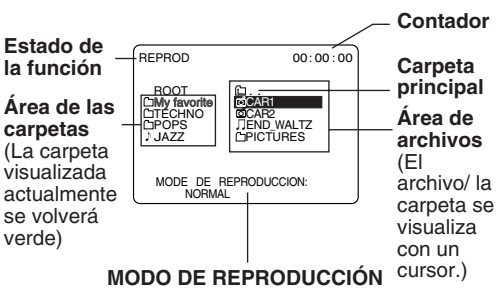
Funcionamiento de la ejecución de MP3/WMA/JPEG

Puede utilizar esta unidad para reproducir audio de formato MP3/WMA/JPEG, grabado para uso personal con una computadora, etc., en un CD-ROM o CD-RW.
La ejecución puede no tener lugar en algunos casos, debido a las condiciones de la grabación.

1 **Presione POWER** en el control remoto o unidad.

2 **Presione OPEN/CLOSE** y a continuacion coloque un disco MP3/WMA/JPEG en la bandeja de discos.
Presione OPEN/CLOSE para cerrarla.

3 Se visualizará el MENU MP3/WMA/JPEG y la ejecución se iniciará automáticamente.
(Se visualizará el directorio del CD.)



: Archivo MP3 : Archivo WMA : Archivo JPEG

: Carpeta : Carpeta principal

■Ejecución MP3/WMA/JPEG (Durante el modo STOP)
Presione ▲▼ para seleccionar un archivo MP3/WMA (♫/♪) o un archivo JPEG (📷), y **presione SET** o PLAY.
• MP3/WMA
Búsqueda hacia adelante/hacia atrás
→Presione FF/SLOW+ o REW/SLOW- durante la ejecución.
Salto de Pista hacia adelante/hacia atrás
→Presione SKIP+ ▶▶| o SKIP-|◀◀ durante la ejecución.
• JPEG
Búsqueda siguiente/anterior
→Presione SKIP+ ▶▶| o SKIP-|◀◀.
Inicie la muestra-diapositiva
→Presione FF/SLOW+ o REW/SLOW-.
Ampliando una imagen →Presione ZOOM.
Rotando una imagen →Presione ANGLE.
Presione STOP para detener la operacion descrita arriba.

■Seleccione MODO DE REPRODUCCION
(Durante el modo STOP)
Presione ◀▶ para mover el cursor a MODO DE REPRODUCCIÓN, y **Presione** ▲▼ para seleccionar el
MODO DE REPRODUCCIÓN deseado.
[MODO DE REPRODUCCIÓN]
NORMAL: Todos los archivos se reproducen sólo una vez
REPETICION DE UNA MUSIC:
El archivo seleccionado se reproduce repetidamente.
REPETICION DE UN ARCHIVO:
Los archivos que se encuentran en la carpeta seleccionada se reproducen repetidamente.
REPETICION DEL DISCO:
Todos los archivos se reproducen repetidamente.

4 **Presione ACTION** para regresar al DVD MAIN PRINCIPAL.

Limited Warranty

PANASONIC CONSUMER ELECTRONICS COMPANY, DIVISION OF MATSUSHITA ELECTRIC CORPORATION OF AMERICA
One Panasonic Way Secaucus, New Jersey 07094

PANASONIC SALES COMPANY, DIVISION OF MATSUSHITA ELECTRIC OF PUERTO RICO, INC., AVE. 65 de Infantería, Km. 9.5 San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic/Quasar Video Products
Limited Warranty

Limited Warranty Coverage
If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product	Parts	Labor	Service	Contact Number
Camcorder	One (1) Year (except CCD Image Sensor) CCD Image Sensor - 6 (Six) Months	Ninety (90) Days Ninety (90) Days	Carry-In or Mail-In	1-800-211-PANA(7262)
DVD/VCR Deck, A/V Mixer	One (1) Year	Ninety (90) Days	Carry-In or Mail-In	1-800-211-PANA(7262)
TV/VCR, TV/DVD, TV/DVD/VCR Combination	One (1) Year (except CRT) CRT - Two (2) Years	Ninety (90) Days Ninety (90) Days	Carry-In: 21″ CRT and Smaller In-Home or Carry-In: 22″ CRT and Larger	1-800-211-PANA(7262)
TV/HDR Combination	One (1) Year (except CRT) CRT - Two (2) Years	Ninety (90) Days Ninety (90) Days	In-Home or Carry-In	1-888-843-9788
Rechargeable Batteries (in exchange for defective item)	Ten (10) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)
Tape (in exchange for defective item)	Five (5) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)
Memory Cards (in exchange for defective item)	Ninety (90) Days	Not Applicable	Carry-In or Mail-In	1-800-211-PANA(7262)

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product or arrange for in-home service, as applicable, during the warranty period.
If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In, Mail-in or In-Home Service
For Carry-In, Mail-In or In-Home Service (as applicable) in the United States call toll free contact number listed above or visit Panasonic Web Site: http://www.panasonic.com
For assistance in Puerto Rico call Panasonic Sales Company (787)-750-4300 or fax (787)-768-2910.
In-Home service, if applicable, requires clear, complete and easy access to the product by the authorized servicer and does not include removal or re-installation of an installed product. It is possible that certain in-home repairs will not be completed in-home, but will require that the product, or parts of the product, be removed for shop diagnosis and/or repair and then returned.

Limited Warranty Limits And Exclusions

This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage, nor does it cover markings or retained images on the picture tube resulting from viewing fixed images (including, among other things, letterbox pictures on standard 4:3 screen TV's, or non-expanded standard 4:3 pictures on wide screen TV's, or onscreen data in a stationary and fixed location). The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, cost of having someone remove or re-install an installed unit if applicable, or travel to and from the servicer, loss of media or images, data or other memory or recorded content. The items listed are not exclusive, but are for illustration only.)

ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor' s Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE (INCLUDING COST OF AN IN-HOME SERVICE CALL, WHERE APPLICABLE) WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and all Customer Service inquiries please contact:
1-800-211-PANA (7262), Monday-Friday 9 am-9 pm; Saturday-Sunday 10 am-7 pm, EST. or send e-mail : consumerproducts@panasonic.com
For hearing or speech impaired TTY users, TTY : 1-877-833-8855

Web Site: http://www.panasonic.com
You can purchase parts, accessories or locate your nearest servicenter by visiting our Web Site.

Accessory Purchases:

1-800-332-5368 (Customer Orders Only)
For hearing or speech impaired TTY users, TTY : 1-866-605-1277
Panasonic Services Company 20421 84th Avenue South, Kent, WA 98032
(Monday-Friday 6 am-5 pm; Saturday 6 am-10:30 am, PST)
(Visa, MasterCard, Discover Card, American Express, Check)

Service in Puerto Rico

Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/ Factory Servicenter:
Ave. 65 de Infantería, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787)750-4300 Fax (787)768-2910

As of August 2002

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